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FOREIGN INFLUENCE IN ANCIENT INDIA

R. A. JAIRAZBHOY

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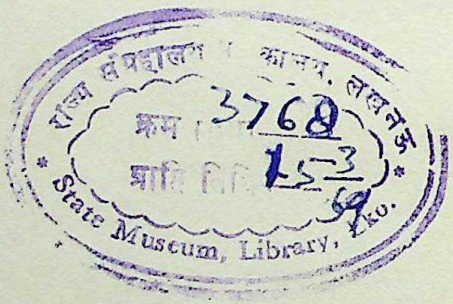

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PREFACE

CONSERVATISM is a root characteristic of ancient cultures. Once the techniques of civilization have been learned or fashioned for the first time, once an idiom has been formed by the native craftsman from the limited horizons within his purview, there follows a period of entrenchment and assimilation. If after this there should be no further impetus from outside, no further contact with a world of different values, then there is a process of hardening in which innovation gives way to repetition, and elaboration is preferred to invention. In the course of Indian history this pattern is very evident: at a given epoch a culture is moulded; it proceeds to perpetuate itself; shows little inclination to evolution, and only allows new ideas to penetrate when, harshly or insidiously, it is imposed upon from outside.

India herself has never been seized by the compelling will to bring other nations within her sway. Already in 851 A.D. Suleiman the Merchant comprehended this when he said, "Wars waged by Indian kings are not usually undertaken with a view to possess themselves of the adjoining dominions."[1] And Arrian attributes a high motive for this attitude of non-aggrandisement: "A sense of justice, they say, prevents any Indian king from attempting conquest beyond the limits of India."[2] If the *Arthaśāstra* treatise is to be regarded as a characteristic manual of beliefs of early Hindu society then Arrian's view must be considered to be rather naive for there it is stated that a king should attack his neighbours, particularly if he is the stronger and if intrigue and assassination do not succeed.[3] Nevertheless the fact remains that India herself never sought to place her yoke on others outside her own limits. She has had to yield time and again to invaders from other lands,

[1] E. Renaudot: *Ancient accounts of India and China by two Mohammedan travellers*, 1733, p. 33.

[2] Arrian: *Indica*, 9, 12.

[3] *Arthaśāstra*, Bk. VII, ch. 2, p. 265. See Kauṭilya's *Arthaśāstra*, tr. R. Shamasastry, 1915, p. 331f. For Indian ethics of war see G. T. Date: *The Art of War in Ancient India*, 1929, pp. 81–2; and V. R. Dikshitar: *War in Ancient India*, 1944, pp. 58f.

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and in each case (with the exception of the Muslims, and to a lesser extent the Sassanians, who had both to give *and* to take from her) she was the recipient rather than the donor. What she learned and took from these foreign contacts is the theme of the present book.

R. A. J.

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ACKNOWLEDGMENT

It is a pleasant duty to record the help I have had from members of the Staff of the School of Oriental and African Studies in the University of London, and its very considerate librarians. To Professor C. J. Gadd I am grateful for the generous sharing of his extensive knowledge, and to Professor A. L. Basham for his apt criticisms and for his expression of general approval. In the initial stages I was favoured by the comments of Mr. A. H. Christie. Dr. J. F. Staal has gone out of his way to assist me, and some suggestions by Dr. A. A. Bake and Mr. N. A. Jairazbhoy have been readily incorporated.

None of the above gentlemen can be held responsible for the views expressed here. Though I have not shrunk from occasional speculation, I have on the whole exercised caution and attempted to keep within the limits of the evidence. I may therefore entertain the hope that I have seldom overstated my case. More detailed researches and new discoveries will undoubtedly entail some modifications of fact and interpretation, and it is conceivable that much more could be said than has been said in this fleeting survey. But if I have brought some valuable data within easy reach of students and stimulated them to widen the vistas of historical relations then I will have accomplished one of my principal aims.

No one need feel alarm that India is an amalgam of so many strains and sources. She is not alone in this, even if she has been more receptive than most. There is assuredly another side of the picture: the things and thoughts which arose spontaneously from the native soil. It would be a folly to deny their existence. But the rich diversity of India is the result of a fusion of native with foreign elements, and unless both are assessed and explained in their own right, there can be no true comprehension of the growth and progress of this ancient and fascinating land.

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"It is true that all cultures, with the exception of the Egyptian and perhaps the Chinese, have been under the tutelage of older cultural impressions: foreign elements appear in each of the world of forms."

OSWALD SPENGLER

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Chapter I

THE INDUS VALLEY AND MESOPOTAMIA

That the Indus civilization of the 3rd millennium B.C. has a marked individuality which sets it quite apart from its opposite in Mesopotamia no one is likely to deny. Here we are concerned only with resemblances, for these, occurring as they do at the very beginning of civilized life in the world, can scarcely be conceived of as fortuitous parallels being enacted simultaneously in two regions separated by a great distance, particularly as we have direct evidence of contact between them. Notable architectural resemblances include the corbelled arch at Tell Asmar and Mohenjodaro, and the use in Sumer and the Indus of circular wells of segmental bricks, stone or baked clay lattice screens for windows, vertical pottery drains and horizontal ones of baked brick.[1]

The drainage of the Indus cities was more advanced, probably because of the heavier rainfall at the time which is attested by the tropical fauna, and it was in any case sufficiently distinct, for the claim has been made that the unusual arrangement of bathrooms and drains in an Accadian building at Tell Asmar were inspired by Indian ideas.[2]

The most conspicuous difference, the irregular streets of Ur[3] and those of Mohenjodaro planned on a fixed and regular scheme, suggest on the one hand an urban development as a result of experience and natural growth, and on the other of a preconceived idea carried out deliberately at a fixed moment in time on the basis of experience gained elsewhere.

It is equally difficult to conceive that so technical a process as faience with its frits and glazes was invented simultaneously in the ancient world. Faience, as we may recall, is the thermal cementing

[1] H. Frankfort: "The Indus Civilization and the Near East," in *Annual Bibliography of Indian Archaeology*, 1932, p. 6.

[2] *Oriental Institute of Chicago. Communications*, no. 16, 1933, p. 48f; and *Ancient India*, I, 1946, p. 21.

[3] L. Woolley: in *Antiquaries Journal*. VII, no. 4. For lack of town-planning also at Ugarit see C. F. A. Schaeffer: *Ugaritica*, 1939, I, Figs. 14, 15.

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of fine quartz grains aided by an alkali or lime, and subsequently glazed with a coloured glass.[4] In Egypt faience beads date from the pre-dynastic period,[5] and in Mesopotamia at least as early as Jemdat Nasr times[6] (c. 3000 B.C.). Modern spectrographic analysis which detects the traces of elements or impurities in faience, has established that the segmental variety of faience beads from Harappa resemble not those of Ur but those of Knossos in Crete. Since the latter have Egyptian affinities of the 18th Dynasty, the Harappan beads are held to have been later objects of c. 1550 B.C.,[7] i.e., from about the date of the destruction of the civilization. It has been observed that miniature rams of faience from the Indus have their legs doubled under them in the style of the lapis rams and bulls from the Royal Tomb at Ur.[8]

So also is it unlikely that the idea of seal engraving was hit upon independently in the three ancient river civilizations, and there are at any rate indications of a migration from Mesopotamia to Egypt,[9] together with such other features as spouted vessels and niched brick architecture.[10] That there was an exchange of seals between Mesopotamia and the Indus is proved by the excavation of Indus seals at Tell Asmar and Agrab, at Kish, Lagash, Susa and Ur.[11] Of these, five have inscriptions in the undeciphered Harappan characters,[12] another has a circular form (which is intrusive to Mesopotamia) with the same script though badly inscribed,[13] two are of cylinder type having respectively the Indus humped bull and the Indus rhinoceros as well as a fish sign,[14] and finally there is a square type seal with a wrong-facing ox and which is inscribed with a line in cuneiform characters.[15] Another type of these same

[4] Cf. *Archaeologia*, LXXXV, 1936, p. 207.

[5] A. Lucas: *Ancient Egyptian Materials and Industries*, 3rd ed., 1948, p. 56.

[6] S. Piggott: *Pre-historic India*, 1950, p. 195. See further Beck in *Ancient Egypt and the East*, December 1934 and June 1935, for the glazing of beads in antiquity.

[7] J. F. S. Stone: in *Antiquity*, 1947, XXI, pp. 201–4.

[8] V. G. Childe: *New Light on the Most Ancient East*, 4th ed, 1952, p. 183.

[9] See H. Frankfort: *The Birth of Civilization in the Near East*, 1951.

[10] H. J. Kantor: "Further evidences for early Mesopotamian relations with Egypt," in *Journal of Near Eastern Studies*, XI, pp. 239–50.

[11] C. J. Gadd: "Seals of Ancient Indian type found at Ur," in *Proceedings of the British Academy*, XVIII, 1932.

[12] *Ibid.*, numbers 2–5, 16.

[13] *Ibid.*, no. 18.

[14] *Ibid.*, nos. 6, 7.

[15] *Ibid.*, no. 1.

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class of seals has no apparent resemblance with those of the Indus, but like the latter these circular seals have the distinctive attribute of having pierced bosses at the back ornamented with grooves.[16]

Of these Indus seals in Mesopotamia, two are of pre-Sargonid date, i.e., before 2303 B.C. and the others somewhat later, one is actually inscribed with an archaic cuneiform lettering, and though this cannot be read it is suggestive that the Indus traders who brought their wares marked with this seal were familiar with the Sumerian script. One of the products imported must have been cloth since the back of one seal still preserves its imprint.

The addresses on fragments of clay at Tello prove that sealings were employed on bundles despatched from city to city.[17] Foreign trade must have been at its peak in Sargon's reign (2303–2247 B.C.). He had conquered Dilmun (Bahrein ?) in the Persian Gulf, and his son Manishtusu speaks of thirty-two Kings of the cities beyond the sea who revolted against him.[18] In the reign of Sargon and of his grandson Naramsin (2224–2187 B.C.) who was deified and called "king of the 4 quarters of the world", the commercial tablets often refer to the transport by water of grain, cattle and asses.[19]

Ur Nammu, first king of the 3rd dynasty of Ur, had already restored trading along the coast as he has averred,[20] and Sargon is reported to have said that ships from or bound for Meluhha, Makan, and Tilmun were anchored in the harbour outside his capital at Agade.[21] It is now known from recently published inscriptions that merchants shipped cargoes of garments, silver and oil to the island of Dilmun and imported from there copper, both as ingots and as utensils such as copper kettles, while other imported objects included beads of precious stones, kinds of woods and ivory in the form of objects such as inlaid tables, combs, spoons and boxes. Since Bahrein had neither the ore nor the fuel necessary for smelting, it is probable that Tilmun served only as a trading station in the Persian

[16] *Ibid.*, nos. 8–14. However corresponding Indus seals are square and have a narrower boss on the reverse (D. H. Gordon : in *Antiquity*, XXXII, December 1958, pp. 245–6).

[17] L. W. King : *A history of Sumer and Akkad*, 1910, pp. 236–7.

[18] S. A. Pallis : *The Antiquity of Iraq*, 1956, pp. 599, 501.

[19] L. W. King : *op. cit.*, p. 235, n. 2.

[20] A. L. Oppenheim : "The sea-faring merchants of Ur," in *Journal of the American Oriental Society*, 74, no. 1, 1954, p. 14.

[21] Legrain : in *Museum Journal*, 1923, p. 208f.

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Gulf from which goods were transhipped.[22] Ivory, for instance, might well have come from the Indus[23] where at the time ivory combs were in use,[24] but the middlemen of the Gulf trade seemed neither to belong to the Indus nor the Euphrates for their recently recovered seals are of a distinctive type.[25] They are of steatite and are circular with grooved and pierced bosses at the back.

Although the Indus craftsmen must have been familiar with the cylinder type of seal of Sumer (three were actually excavated in Mohenjodaro), they preferred a square stamp type perhaps for the obvious reason that it was easier to carve or engrave on a flat rather than on a rolled surface.

While familiar with the fauna of the Indus through their seals (for example the cylinder seal found at Tell Asmar has on it an elephant, a rhinoceros and a gharial, or man-eating crocodile[26]) the Mesopotamian engravers did not choose to copy these beasts that were strangers to their own land. One exception is the humped bull, the *Bos indicus* which occurs in clay figurines at Susa in Elam[27] and on a stone vase from Tell Agrab on the Diyala which seems to have been an imported object.[28] As for the theme of tigers intersecting in a wheel on a seal amulet from Mohenjodaro,[29] we cannot say that it influenced exactly the same theme on a Sumerian seal.[30] Indeed, the reverse is more likely to be true since the latter dates from the earlier period of the Royal Cemetery at Ur, and since the animal wheel design has a later history in Mesopotamia and none in India. Moreover we have a case in point that Indus seals adopt a favourite Mesopotamian motif. If it is at all doubted that the standing figure holding at bay two rearing tigers on a Mohenjodaro

[22] A. L. Oppenheim : *op. cit.*, pp. 6–17.

[23] At Lothal at the head of the Gulf of Cambay, a site associated with the Indus cultures, an ancient dockyard (710′ × 116′) has been excavated by S. R. Rao in September 1960, with a loading wharf and spill channel. (*Illustrated London News*, February 25, 1961, p. 302f.)

[24] E. Mackay : *The Early Indus Civilizations*, 2nd ed., Pl. XXIV, no. 1.

[25] G. Bibby : in *Antiquity*, XXXII, no. 128, 1958, p. 243f. Cf. R. E. M. Wheeler : *The Indus Civilization*, 1959, p. 111.

[26] H. Frankfort : *The Times*, 26th March, 1932.

[27] S. Piggott : *Pre-historic India*, 1950, p. 117.

[28] V. G. Childe : in *Antiquity*, XIII, 1939, p. 13. Pl. IV. 1.

[29] J Marshall : *Mohenjodaro*, III, tab. 112, p. 386.

[30] C. L. Woolley : *Ur Excavations*, II, p. 340. no. 54.

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seal[31] is fashioned after its counterpart in Sumer, then all we have to do is to look at another seal where a tiger is attacked by a bullman,[32] for this man with bull's horns, ears, hooves and tail undoubtedly corresponds to the prototype of Enkidu who plays the twin hero role in Mesopotamian myth.

Again it is on such a creature, a man-headed bull probably of the late Accadian period, that we find a motif recurring in the Indus. This motif is the trefoil carved to receive incrustations of which we have another example from Ur (c. 2200 B.C.) on a Sumerian Bull of Heaven,[33] and it occurs at Mohenjodaro on a bearded man in steatite and the trefoils are again carved for receiving red paste.[34] As it occurs on the cloak, it may have become a textile pattern, but a further indication that it originated in Mesopotamia is the fact that this same steatite man has his hair done in Sumerian style, that is, the hair is gathered up in a bun or chignon at the back of the head, and secured by a silver or gold or woven fillet worn round the forehead.[35] In which direction the current of fashion was flowing is indicated by the bronze toilet set comprising of a piercer, earscoop, and tweezers from the First Dynasty Cemetery at Ur,[36] and one of similar pattern at Harappa where the resemblance even extends to the implements being attached to a knotted loop.[37] And this is by no means an isolated find. Girls in the Indus wore beads and necklaces that have Mesopotamian affinities. In addition to the faience beads, we have etched cornelian beads with designs (particularly the figure 8) standing out in white on the red background and the Indus specimens are undoubtedly closely allied to Accadian ones from Kish, Tell Asmar and Ur.[38]

[31] E. Mackay: *Further excavations at Mohenjodaro*, 1938, I, p. 337. II. Pls. LXXXIV, 75, 86. [32] J. Marshall: *Mohenjodaro and the Indus Civilization*, 1931, I. p. 61, II, pl. CXI.

[33] British Museum no. 1931. cf. *Antiquaries Journal*, III, 1923, pl. XXXIV, and *Illustrated London News*, November 13, 1926, Another such neo-Sumerian androcephalus bull at Tello (A. Parrot: *Tello*, pl. XII a, p. 146, n. 37).

[34] R. E. M. Wheeler: *The Indus Civilization*. Supplement to the *Cambridge History of India*, 1953, p. 64.

[35] E. Mackay: *The Indus Civilization*, 1935, p. 197.

[36] *Antiquaries Journal*, VIII, 1928, p. 22 and pl. X. 1 also L. Woolley: "The Royal Cemetery", *Ur Excavations*.

[37] Archaeological Survey of India, *Report*, 1923–24, pl. XIX, p. 22.

[38] E. Mackay: in *Journal of the Royal Asiatic Society*, 1925, p. 697f., and H. Beck in *Antiquaries Journal*, XIII, 1933, pp. 384–98.

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The fact that some of the cornelian beads in the Indus were found in an unfinished state may mean that they originated there,[39] but on the other hand they are rare in Mohenjodaro and were imitated in steatite, on which the red ground for the design was produced by means of a burnished haematite paint.[40] Nevertheless Sumerian inscriptions refer to cornelian imported from Meluhha together with ivory, gold and probably ebony, and of the two alternatives, India and East Africa, several reasons are suggested for Meluhha being the former.[41] Two other types of beads are common to the two civilizations, the glazed, notched, edged bead which is commoner at Kish and Ur, and the gold-capped, hardstone beads which are commoner at Mohenjodaro.[42] Kidney-shaped inlays of bone are also identical in shape in the two regions, and there is a type of knobbed pottery at the two sites which have a distinct resemblance.[43] The bowl-like pot lid at Harappa is found in Jemdat Nasr, and some specific motifs are common to Harappan painted pottery and that of the Middle East, especially Sialk, Susa I and Halaf. Despite the likeness in detail and ground colour, the general appearance of the Indus painted pottery is quite individual.[44] One pottery jar found at Mohenjodaro is actually claimed to bear a fragmentary Sumero-Babylonian cuneiform inscription,[45] but this is indeed very doubtful, and therefore the cylinder seal found on the hills near Herat in Afghanistan[46] still remains the farthest example of the cuneiform inscription in the East. Detailed analysis reveals that among pottery forms there is an unmistakable connection between Harappa and North East Iran and Anau specifically in the dish-on-stands, perforated heaters, feeding cups, and vessels with knobs.[47]

[39] E. Mackay: "Beadmaking in Ancient Sind," in *Journal of the American Oriental Society*, 1937, Vol. 57, no. 1, p. 3.

[40] E. Mackay: "Further links between Ancient Sind, Sumer and Elsewhere," in *Antiquity*, V, 1931, p. 461. [41] W. F. Leemans: *Foreign Trade in the Old Babylonian Period*, 1960, pp. 161, 163. [42] *Antiquity*, V, pp. 461–2, 465.

[43] H. Frankfort: "The Indus Civilization" in *op. cit.*, p. 4.

[44] R. F. S. Starr: *Indus Valley Painted Pottery*, 1941, p. 85f.

[45] C. L. Fabri: in *Indian Culture* (Calcutta), III, 1937, no. 4, pp. 663–74.

[46] Attributed to the 3rd dynasty of Ur. (A. H. Sayce: in *J. J. Modi Memorial Vol.*, 1930, pp. 561–2).

[47] F. A. Khan: "An Archaeological Study of the Indus Valley Civilizations and their relationship to the early cultures of Iran," Ph. D. Thesis, London University, 1954, pp. 342f, 382.

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But while we cannot establish these common types of artifacts definitely as imports we can be relatively sure about the greenish gray steatite vase at Mohenjodaro. The combed, incised basketwork pattern on it is found on the same material on a double vase found at Susa,[48] a cylindrical vase from the Temple of Sin at Khafajah[49] (in both examples there is the representation of a primitive Mesopotamian hut constructed of reeds and mats), and finally a vase of the same type from Kish which may be as early as c. 2800 B.C.[50] Among portable objects of import we may also include bronze pins, for there is a striking resemblance between the spiral and animal-headed pins of Harappa and North-East Iran.[51] Further objects of common resemblance between these two areas include gold fillets with perforated ends, coiled bronze bracelets and finger rings, double-headed animal protomes, zoomorphic vases, bird whistles, etc.[52] The resemblance extends even into the sphere of entertainment, for children's toys such as hollow bodied rams on wheels are found both at Mohenjodaro and at Ur and Kish,[53] while other common elements include cubical dice and tetrahedral gamesmen.[54]

A more vigorous form of sport, and indeed a dangerous one, was prevalent in the Indus — that of bull-grappling, as represented on seals. But it is quite futile in the present state of our knowledge to insist that it was connected with a religious cult, that it had the same connotation as in Crete, or that it was influenced by,[55] or itself influenced,[56] the form as practised in Minoan Crete a whole millennium later. In Mesopotamia, it is true, we do not have a close analogy, but we do have at least one instance of bull grappling of a sort on a cylinder seal,[57] and of course the theme of the mythical

[48] E. Mackay : in *Antiquity*, V, p. 459, and VI, 1932, p. 357.

[49] W. Andrae : *Das Gotteshaus und die Ur formen*, p. 76, Figs. 74a, b.

[50] H. Field : in *Antiquity*, VII, p. 85, pl. 2.

[51] S. Piggott : "Notes on certain metal pins and a macehead in the Harappa culture," in *Ancient India*, no. 4, 1947–48, pp. 26–40.

[52] F. A. Khan : *op. cit.*, p. 368f. [53] E. Mackay : in *Antiquity*, V, 1931, p. 470.

[54] *Ibid.*, pp. 463–4. For further parallels see J. Marshall : *Mohenjodaro and the Indus Civilization*, 1931, I, pp. 104–5.

[55] C. L. Fabri : "The Cretan Bull — Grappling sports and the Bull Sacrifice in the Indus Valley," in *Archaeological Survey of India Ann. Rep.*, 1934–35, pp. 93–100.

[56] K. N. Sastri : *New Light on the Indus Civilization*, 1957, p. 36f.

[57] British Museum No. 116720.

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hero vanquishing the beast whether bull or lion is one of the most ubiquitous types. In the cemetery at Ur, the poorer graves each had a seal of this nature either with the heroic hunter or the lion overthrowing the bull; and since all these graves have daggers and spear blades it is suspected that the seals belonged to the military and symbolized victory in battle.[58] It is not impossible that an Indus inhabitant seeing such a seal with the hero grappling a bull might have taken it for a real practice and thereby introduced the sport. Through a Tamil poem of not later than the 3rd century A.D. we know that bull-fighting was resorted to as a method for the girls selecting husbands, and bull-grappling is still practised among primitive tribes in South India,[59] but from this we cannot confidently assert that we have here a survival from the Indus whose very significance has remained unchanged.

Another ostensible parallel of this kind is the female deity on a seal around whom the Mesopotamian sun god is bending a bough in the form of an arch.[60] We have on a Harappa seal (no. 316) a figure standing under an arched bough and the suppliant before it is strong indication that the enshrined figure is a deity. In the case of Harappa we cannot go further than to say that she is the "indwelling deity of the pipal (?) tree,"[61] while we have a better basis for conjecture in Mesopotamia where an inscription states that Warad Sin dedicated the House of the plant of life to Ninin-sina.[62] However, in view of the fact that the Indus script remains undeciphered, the true nature of the Indus religion continues to baffle, and can only be reconstructed through intelligent guesses from the analogy of later practices,[63] at best always a hazardous

[58] L. Woolley: *Excavations at Ur*, 1954, p. 83.

[59] W. Crooke: in *Folklore*, LXXVII, 1917, pp. 141–163; Bishop: "The Ritual Bullfight," in *Smithsonian Institution, Annual Report*, 1926, pp. 447–56; and T. G. Aravamuthan: in *Indian Historical Quarterly*, February 1942, p. 372.

[60] W. H. Ward: *Cylinder Seals of Western Asia*, p. 53. He considers the deity to be the underworld goddess Allatu. Cf. S. N. Kramer: *History begins at Sumer*, 1958, pl. 44. Cf. H. Frankfort: *Cylinder Seals*, pl. XXI. a.

[61] J. Marshall: *Mohenjodaro and the Indus Civilization*, pp. 63–4, 393. And Sastri: *op. cit.* pl. II. 4. For the subsequent course of the tree cult in India see now O. Viennot: *Le Culte de l'Arbre dans l'Inde Ancienne*, 1954.

[62] G. A. Barton: *Royal Inscriptions of Sumer and Akkad*, 1929, pp. 320f. no. 5.

[63] e.g. see K. N. Dikshit: *Prehistoric Civilization of the Indus Valley*, 1939, p. 33f.

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undertaking.[64] There are terracotta figures of the mother-goddess, the deity of the pipal tree, and the seated bull headed deity[65] with animal attributes, but there are no statues of gods and there is no evidence for temples. This would suggest that religion was a private affair and mythology if any was of a very limited kind. This constitutes one of the major differences with Mesopotamia.

A formulated religion is one of the signs of civilization, and in this respect Mesopotamia could be said to be far in advance of the Indus. The intellectual superiority of Mesopotamia is also attested by its written literature and laws ; there is no evidence for these yet in the Indus, though we must always allow for the possibility of writing on more perishable material, for example on compressed cotton as was the custom later. The pictographic script in Sumer was soon superseded and cuneiform evolved, but in the Indus there is no evident sign of development. Graphically, but not in their sequence, the Indus conventionalized signs resemble proto-Elamite, while the anthropomorphous signs resemble Old and Middle Kingdom Egyptian hieroglyphic.[66] In this class of signs the Indus script does not resemble Sumerian, which uses parts of the body but never the complete silhouette. The images used for the picture-writing in the two centres are for the most part totally different in character, but this does not exclude the possibility of an initial influence. It would

[64] For example the Sumerian practice of human sacrifice at the death of the king is to be found in the report of Abu Zaid (950 A.D.) who claims that the lives of 300 to 400 men were voluntarily sacrificed at the death of Indian kings, a practice identified with the now defunct festival at the Tirunavayi Temple in the Ponnani taluk in Kerala (cf. Logan : *Malabar Manual*, I, pp. 163–68 ; and S. M. H. Nainar : *Arab Geographers' knowledge of S. India*, 1942, pp. 106–107). But can we presuppose an actual connection between the ancient Sumerian practice and its counterpart in India in relatively recent times ?

[65] This attribute is ubiquitous among deities. Ancient Mesopotamian texts describe Nannar as "strong bull, great of horns" (M. Jastrow : *The Religion of Babylonia and Assyria*, 1898, p. 303), and Ellil as an "overpowering ox" (L. R. Farnell : *Greece and Babylon*, 1911, p. 56). The Arabian Moon god 'Amm was described by the Qatabanians as "bull lord" (G. Ryckmans : *Les Religions Arabes Pré-Islamiques*, 1951, p. 42). And even the Vedas describe Indra as a "bull, impetuous, strong" (Dutt : *Indian Poetry*, p. 4), and Agni "a mighty bull" (*Ṛg Veda*, V, 3, 1).

[66] G. R. Hunter : *The Script of Harappa and Mohenjodaro and its connections with other scripts*, 1934, pp. 2, 21.

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be extravagant to believe that man first acquired the idea of writing at practically the same time in the three contemporary civilizations Sumer, Egypt and the Indus. If we concede in principle that there was an influence, then we must further qualify this by asserting that there was no actual transference of a system but that it was rather a case of stimulus diffusion, that it is to say that it was the idea of writing and not the form which was passed on.

This belief in an unicentral source for civilization is not purely a modern bias unrelated to reality, but as we shall show, was the literal belief of the people who lived close to the time when civilization actually sprang. The Sumerian religious poem in question relates that in the possession of the god Enki in his city of Eridu were all the institutions (decrees ?) and arts which go to make up civilized life as it was understood by the Sumerians.[67] But under the influence of drink he inadvertently passes on to his daughter Inanna of Erech, such manual skills as writing, carpentry, music, metal-, leather-, and basket-work, a knowledge of the functions of kings and priests, judgment, etc. The goddess loads them into the boat and takes them up river to Erech.[68] When Enki becomes sober he sends messengers to bring the precious cargo back, but he is too late[69] — that is to say the knowledge of all these refinements is no longer the guarded secret of this pre-eminent city.

Cannot the first sparks of civilization have drifted in the opposite direction too, by easy stages in coasting vessels, until they took root in the Valley of the Indus ?

[67] This surely is the story that survives in Berossus of the fish-man Oannes bringing the arts of civilization to Babylonia from the sea ? (Schnabel : *Berossus*, pp. 172f.)

[68] Woolley, *op. cit.*, p. 38, claims that Uruk civilization came from the north and brought with it the age of metal.

[69] S. N. Kramer : *Sumerian Mythology*, p. 64f ; and C. J. Gadd : *Ideas of Divine Rule*, 1948, pp. 11–12.

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Chapter II

THE WESTERN CONNEXIONS OF THE INDO-ARYANS

The next contact of India with the Middle East coincides with the Aryan invasion and the consequent destruction of the Indus Civilization. But if there is an Aryan element in the Kassites who originally dwelt in the area east of the Zagros mountains, they do not imitate the example of the Vedic followers of Indra who reduced the forts of the native Dasyus to dust. Instead, the Kassites establish a dynasty at Babylon in c. 1756 B.C., build a ziggurat in the Babylonian manner,[1] and do not impose a literature or culture of their own.[2] Their language evidently has some kinship with Hittite,[3] and some of their name elements resemble the personal names of the Hittite-Mitanni people.[4] In the names of their kings occur elements related to Indian deities, particularly "surias" (= Sūrya, sun god) and Marutaḥ (=Maruttas, war gods). The form in which the first name occurs is for example Sagarktisurias, which would mean "my redemption is Surias." The name "Sumalia" occurs (c. 1130 B.C.) in an inscription of Nebuchadnezzar I, and is suggested to be the Indian *sumālā*, "garland."[5] Finally the name of the Kassite king Abirattas (c. 1678 B.C.) would correspond to the Indian word *abhiratha*, "standing on a chariot."[6]

This last name is suggestive since it is probable that it was the Kassites who popularized the use of horses for drawing chariots,

[1] At Choga Zanbil, but with the prolific use of vaults. (cf. Ghirshman: in *Orientalia*, 1958, p. 15.)

[2] They do perhaps introduce feudalism as is evident from the land grants on boundary stones.

[3] T. G. Pinches: "The language of the Kassites," in *Journal of the Royal Asiatic Society*, 1917, pp. 101–114. See now K. Balkan: *Kassiten-Studien I: Die Sprache der Kassiten*, 1945.

[4] A. T. Clay: *Personal Names from the cuneiform inscriptions of the Kassite period*, 1912, pp. 44–5.

[5] N. D. Mironov: "Aryan Vestiges in the Near East of the 2nd millenium B.C." in *Acta Orientalia*, XI, 1933, p. 143.

[6] *Ibid.*, p. 145.

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instead of asses. The Indo-Iranian form for horse, *asua*, is clearly the basis of the Babylonian *susu*, of which the Aramaic is *sûsiâ* and the Sanskrit *aśva*.[7] Aryan invaders also introduced the horse-drawn chariot into India. The deities of the Ṛgveda are drawn by different steeds — Indra by two bay steeds, Agni by ruddy steeds, Āditya by fallow steeds, Maruts by dappled mares, Aśvins by two asses, Vāyu by a team of horses, and so on.[8] The word for chariot in the Ṛgveda, *ratha*,[9] clearly indicates its foreign connexion, for it is an Indo-European 'wheel' word related for example to the Latin *rota* and the Celtic *roth*. Indeed the war chariot plays so important a role in the Ṛgveda and in later literature that a detailed reconstruction of it is possible, and indicates that it was a very similar vehicle to that known in other regions where the Aryans ventured.[10] A Cappadocian seal impression of c. 2000 B.C. has the representation of a chariot drawn by four horses, which must be very near in point of time to its adoption.[11] One of the earliest literary notices of the horse-drawn war chariot is in Egyptian records, where it is stated Ahmose I (after 1580 B.C.) rode in one against the Asiatic invaders, the Hyksos.[12] The Egyptians prized the chariots of their enemy : the army of Thothmes III captured 924 chariots and 2,200 horses at the battle of Megiddo in 1479 B.C.[13] Before the end of the 15th century the Mitanni are known to have sent ten wooden chariots as a present to the Pharaoh.[14] Hittite chariotry was so skilled that it nearly succeeded against the Egyptians of Rameses II in 1288 at Kadesh.[15] A hint of Hittite mastery in horsemanship is gathered from the Tavagalavas letter probably at the end of the 14th century, where the Hittite king recalls how he used to ride in a chariot with a prince of the Ahhijawa (Achaean Greek ?) and with a Hittite "master of the horse" in control.[16] This leads us

[7] V. G. Childe : *The Aryans*, 1926, p. 18.

[8] A. A. Macdonell : in *Festschrift E. Windisch*, 1914, p. 168.

[9] See A. A. Macdonell and A. B. Keith : *Vedic Index of names and subjects*, 1912. [10] S. Piggott : *Prehistoric India*, 1950, pp. 273–81, Figs. 31, 32.

[11] Pinches : in *Liverpool Annals of Archaeology and Anthropology*, I. pl. XVII, no. 11. [12] J. H. Breasted : *Ancient Records of Egypt*, II, 7–10.

[13] *Ibid.*, II, 596. [14] Knudtzon : *Die el-Amarna Tafeln*, XL.

[15] J. H. Breasted : *A history of Egypt*, 1909, pp. 431–2.

[16] H. L. Lorimer : *Homer and the Monuments*, 1950, p. 323. F. Sommer : *Die Ahhijavā Urkunden*, 1932, pp. 372f. identifies the Ahhijawa not with the Greeks but with the inhabitants of the South-West coast of Asia Minor.

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back to India, for we know that the Mitannian Kikkuli in his treatise on chariot racing uses Sanskrit words for the turning-post *vartanna*) and such numerals as 1, 3, 5, 7, 9 — *aika*, *tera*, *panza*, *satta*, *na*. Kikkuli also refers to a class of warriors as Mariannu, a name apparently related to the Sanskrit Marya, "a young hero."[17] These *mariannu*, fighters in war chariots, constituted the highest class at Alalakh. The Indo-Aryan origin of the word is evident from the Mongolian equivalent *morin*, and Russian *merine*, both meaning "horse."[18] It is not impossible that the name Mitajñu which recurs thrice in the Ṛg Veda may conceivably refer to the Mitanni, and the Keśis, connected in the Ṛg Veda with horses, be an allusion to the Kassites.[19] The Hittites may also have derived the word *yugan*, "a yoke," probably also *yugas*, "one year old" and *tâyugas*, "two year old" used of horses and oxen, through their connexions with Aryan horse breeders.[20]

The Aryans speaking the language of the Vedas are remembered in a late tradition as having descended from common ancestors of the Kāśyapa, who lived in Śākadvīpa[21] or Western Region, probably bordering the Caspian. The Śākadvīpa of the Purāṇas has been connected with the *Sakā tyaiy taradraya*, i.e., "the Scythians that are beyond the sea," in the Nakshi Rustum inscription of Darius.[22] The Greek author Aristeas from Prokonnesus (7th century B.C., author of a poem on the Arimaspeans of which only fragments survive) told of a great "Völkerwanderung" in the 8th century B.C., starting somewhere in the heart of Asia and resulting in the Scythians turning westwards, invading the east of S. Russia and ousting the Cimmerians.[23]

[17] P. Jensen: "Indische Zahlwörter in keilschrifthittitischen Texten," in *S.B.A.W.*, 1919, p. 367f, and Hrozny in *Archiv Orientalni*, III, p. 431f.

[18] A. Salonen: *Hippologica Accadica*, 1955, p. 210.

[19] D. R. Bhandarkar: *Some Aspects of Ancient Indian Culture*, 1940, p. 3.

[20] A. H. Sayce: in *Oriental Studies in honour of C. E. Pavry*, 1933, p. 400. cf. E. H. Sturtevant and E. A. Hahn: *Comparative Grammar of the Hittite Language*, rev. ed., I, para 61a.

[21] *Harivansa* (Langlois) III, 28. Kāśyapa was evidently also one of the names of Multan. (Cunningham: *Ancient Geography of India*. p. 232. Alberuni's India. tr. E. Sachau. I. p. 298.)

[22] H. C. Raychaudhuri: in *Indian Culture*, VII, 1940, p. 111.

[23] Tomaschek: in *Sitzungsberichte der Wiener Akad. der Wissenschaften*, 116, (1888, p. 715f.) The Iranians are held to have come into Iran c. 900 B.C. and

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The Aryan invasion of a millennium earlier may have arisen in a similar fashion, and in any case we must not omit to compare the later parallel of the Sakas (130–110 B.C.) and Kushans pouring out of Central Asia into India and of the Huns crossing the Volga into Europe.[24] The Avesta knows the beginning or source of the Aryans as *Airyana Vaejo* (Pahlavi Iran-Vej). The Avestan *Vaejo* corresponds to the Sanskrit *bīj* meaning "beginning or source." The Avesta describes it as a place of extreme cold that became overcrowded (Vend. I. 3–4; II. 8–18). From the description in the Avesta and the Pahlavi Bundehash, one writer has claimed that the site of the Airyana Vaejo, the birthplace of the primitive Aryans, was to the South-eastern foot of the Caucasus.[25]

Whether the Mitannian kings (1475–1280 B.C.) on the upper Euphrates were a direct offshoot of the Aryans or not their names are certainly Aryan, for example Saussatar, Artatama, Sutarna, Tusratta, and Mattiuaza.[26] Aryan chiefs also ruled in the Near East, since we find in the Amarna letters (1380–50 B.C.) such names as Artamanya, chief of Ziribasani (probably Basan), Suwardata adversary of Abdigiba of Jerusalem. These names, it is held, arta-, -data, zirda-, -miasda, and -warzana, come from a dialect closely allied to Iranian.[27] It was argued by others that it was useless to speculate if this ruling class was Indian mixed with Iranian since "any or all the words may be 'Iranian' of a period before Iranian developed its peculiarities."[28] A name such as Sunassura, king of Kizwatna, is claimed to be an Indian name related to *śūra* as well as Avestan *sūra*, "strong, brave, hero."[29] Indian etymologies were gradually found for the other names such as Abiratta = Old Indian *Abhi-ratha*, "owner of a superior chariot," and Artassumara =

the Dahae into Parthava-Khurasan in 250 B.C. (E. Herzfeld: *Zoroaster and his World*, p. 696).

[24] J. Charpentier: "The original home of the Indo-Europeans," in *BSOS*, IV, 1926–28, p. 165.

[25] J. D. Nadirshah: "Airyana Vaejo, the Cradle of the Aryans," in *Proc. and Trans. of the First Or. Congr.* Poona, 1920, I, pp. 84–94.

[26] H. Oldenberg: in *Journal of the Royal Asiatic Society*. 1909. pp. 1094–1109, and Hrozny: *Die alteste geschichte Vorderasiens*, p. 14.

[27] Bloomfield: in *American Journal of Philology*, XXV, p. 1. f.

[28] S. Smith: *Early History of Assyria*, 1928, p. 385.

[29] A. Götze: in *Oriental Studies in honour of C. E. Pavry*, 1933, pp. 127–9.

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Ṛtasmara, "remembering the sacred law."[30] Since then Indian equivalents have been found for a large number of names of which we can only include a select list below.[31]

Swardāta	= Indian	*Svardāta*	: "given by Heaven."
Subandu	= ,,	*Subandhu*	: "having good kinsmen."
Satuara	= ,,	*Satvara*	: "swift."
Indaruta	= ,,	*Indrota*	: "upheld by Indra." (this name appears in the Ṛg Veda. VIII. 68, 15.)
Birasēna	= ,,	*Vīrasena*	: possessing an army of heroes."
Artadāma	= ,,	*Ṛtadhāman*	: "abiding in the Divine law."
Biridaswa	= ,,	*bṛhadaśva*	: "possessing great horses."
Namyawaza	= ,,	*nāmya-vāja*	: "one who owns a glorious prize."
Suttarna	= ,,	*sudharṇā*	: "very strong."
Endarva	= ,,		"Indra's man."
Summittaras	= ,,	*su-mitra*	: "a good friend."

An interest in horses is reflected in such names as Tuisrata: "having the chariot of terror"; Saussatti: "the man who possesses beautiful horses"; and Sattawadza: "he who has won the prizes at the horse races." Another element on which we may comment is *arta* which is West Iranian. It corresponds to the Avestic *asha* and the Vedic *ṛta*, in each case meaning "truth," or "the right way,"[32] a concept which is incidentally related to the Egyptian *maat*, and the Hebrew *sedek*. In the Avesta *asha* appears as a personified principle, whereas in the Vedas *ṛta* is abstract and may be associated with any deity.[33]

As is now well known some of the Mitannian gods were Aryan, for Mattiuaza, in his treaty with the Hittite king Subbiluliuma

[30] W. Porzig: in *Zeitschrift fur Indologie und Iranistik*, 1927.

[31] N. D. Mironov: "Aryan Vestiges in the Near East...." in *Acta Orientalia*, XI, 1933, pp. 171–9, 186–9, 205–6. And P. E. Dumont: "Indo-Aryan names from Mitanni, Nuzi, and Syrian documents," in *JAOS*, 67, 1947, p. 251.

[32] L. de la Vallé Poussin: *Indo-européens et Indo-iraniens l'Inde*, 1924, p. 82.

[33] H. Zimmermann: "Asha in the Gathas and Ṛta in the Ṛigveda," in *J. J. Modi Memorial Volume*, 1930, pp. 414–23.

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signed in 1380 B.C. at Boghazkoy, invokes not only Babylonian gods to witness the treaties, but Mitra, Varuṇa, Indra, and Nāsatya in the form in which they appear in the Ṛg Veda.[34] They occur in the treaty as *ilâni Mi-it-ra-as-si-il ilâni A-ru-na-as-si-il In-da-ra ilâni Na-sa-at-ti-ya-an-na*. Since the form for Nāsatya is quite different in the Avestan language (Naonhaithya) it is argued that the Mitannian did not speak Iranian but Indo-Aryan.[35] Varuṇa appears to be connected with the Hittite *arunas*, "sea".[36] A Hittite hymn invokes the sun to rise from the *arunas*.[37] It has been suggested that this Hittite *arunas* is the Mitannian god Uruvana, borrowed by them and then mispronounced.[38] According to another view the Hittite *arunas* was the cause of Varuṇa becoming an ocean god, though originally he had a closer connection with the night and the night sky.[39] It is argued that Varana, "the all-embracing sky," became Varuṇa in India, with a distinct personality and entity, whereas in Iran it remained only as the name of the material heaven, and then of a mythical region, the Varena, which was the seat of the mythical fight between a storm god and a storm fiend.[40] Undoubtedly related too is the Greek Ouranos. He is claimed to go back to an original Uoruano, almost identical with the Mitannian Uruwana, while the Indian Varuṇa derives from the form Uoruno.[41] However, it is notable that there is no reflection in the Vedas of the story of the Greek Ouranos oppressing his relations and then being emasculated by one of them, resulting in Giants springing from the earth and Aphrodite from the foam of the sea,[42] a myth now known to have been of Hittite origin.[43]

[34] S. Konow : *Aryan gods of the Mitani people*, 1921, pp. 4–5.

[35] E. Meyer : *Sitzungsberichte der K. Preuss. Akad. der Wissen*, 1908, I, p. 14f.

[36] Sommer in *Orientalistische Literatur Zeitung*, 1921, p. 200.

[37] A. B. Keith : "Mitanni, Iran and India," in *Modi Memorial Volume*, 1930, p. 94.

[38] Kretschmer : "Varuṇa und die Urgeschichte der Inder," in *WZKM*, 1926, pp. 1–22.

[39] Brandstein in Hirt-Festschrift, II, p. 38.

[40] J. Darmsteter, *The Zend Avesta*, Pt. I. *The Vendidad*, SBE vol. IV, 1880, p. LVIII. Cf. also his *Ormazd et Ahriman*, Paris, 1877.

[41] cf. G. Dumézil : *Ouranós-Váruṇa. Etude de mythologie comparee indo-europeenne.*

[42] A. B. Keith : "Varuṇa and Ouranos" in *Indian Culture* (Calcutta), 1937, no. 3. p. 426.

[43] H. G. Güterbock : in *American Journal of Archaeology*, LII, p. 123f.

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The important god of fire of the Ṛg Veda, *Agni*, though absent in the Hittite-Mitanni treaty, occurs in another context in a Boghazkoy text.[44] The name *Agni* is identical with the Latin word *ignis*, "fire", (also Lithuanian *ugnis* and Old Slavic *ogni*) and here we may point out that the word *agn* occurs at Ugarit in North Syria and is held to mean "fire", a word perhaps introduced as a result of Aryan influence.[45] The name for "fire" in the Persian Avesta is quite different, being *atar*, and this does not occur in the Indian Veda except in the Vedic proper name Atharvan, which corresponds to the Avestan name of the fire priest. Agni, as a messenger between gods and man, was known to the Vedas as Narā-śamsa. This corresponds with the Avestan messenger of Ahura, Nairyô-sangha.[46]

If, as we know, the ruling artistocracy of Mitanni were Aryan in race, we should expect to find their language also to be related to the Aryan group, but this is not the case, and one writer has endeavoured to show in a painstaking way that phonetic, lexical and grammatic resemblances exist between Mitanni and Dravidian languages, particularly the Tamil of South India, and suggests, from the Brahui Dravidian pocket in Eastern Baluchistan and the resemblance of this language with Elamite, a proto-Dravidian migration into India.[47] We cannot ourselves pronounce an opinion on the probability of this view, but assert again that the only migration of which we can be certain is that of the Aryans into India. In the Ṛg Veda (IX.41.1-2) it is related of the Aryas : "Active and bright have they come forth, impetuous in speed like bulls, chasing away the black skin. Quelling the Dasyus devoid of rites . . . ." In the Middle East they correspond to the Manda hordes from the north-east who are mentioned as the enemies of the Accad dynasty as early as the 23rd century B.C., and are also mentioned in the Boghazkoy texts.[48]

[44] Lesny : in *Archiv Orientalni*, 1932, p. 259. n. 2.

[45] M. H. Pope : *El in the Ugaritic Texts*, 1955, p. 80. cf. p. 103.

[46] J. Darmsteter : *The Zend Avesta. op. cit.*, (cf. Vendidad-Fargard. XXII. 7).

[47] G. W. Brown : "The possibility of a connection between Mitanni and the Dravidian languages," in *Journal of the American Oriental Society*, L, 1930, pp. 273–305.

[48] W. F. Albright in *Journal of Biblical Literature*, 1924, XLIII, p. 383 ; and Forrer : in *Zeit. Deut. Mor. Gesell*, 1922, pp. 247–69.

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Though their functions and characteristics may be different to some extent, the Iranian gods Mithra, Yima and Veretraghna undoubtedly have their counterpart in the Indian Mitra, Yama and Indra Vṛtrahan. Moreover the Ṛg Vedic gods Rudra (Śarva) and Nāsatya become the Zoroastrian demons Saurva and Nāonhaitya.[49] The daevas including Indra, Sāuru (a symbol of death) and Nāonhaitya plotted the destruction of Zoroaster according to the Avesta (*Vendidad.* XIX. 43–7), and were therefore condemned as evil spirits. Thus these gods of the Vedas (and presumably also of Iran before Zoroaster's reform) became demons in the Avesta, and indeed the very words for "god" and "demon" themselves—the Vedic *deva*, Zend *dâeva* ; Vedic *asura*, Zend *ahura*, each pair came to have a contrary meaning.[50] But since it is observed that an opposition between the two sorts of gods also exists in India where the idea of the *asura* is attached to malignant demons, it is concluded that a certain difference must already have existed between the Asuras and the Devas in the Indo-Iranian period.[51] At least by the time of Xerxes the daevas were regarded as evil powers, for in an inscription he forbids their worship.[52] That the inversion of deva into demon is a deliberate act of reform is clear from the fact that the designation deva is elsewhere among the Aryans always applicable to the good deity, having descended from the Indo-European word *dieu-s*, which produced the Hittite *siunas*,[53] the Greek Zeus, the Sanskrit Dyaus, and from *Dyaus pitar* (father) to the Latin Jupiter.

Now the question arises whether the Avestan Ahura is cognate with the Vedic Varuṇa, as one school claims,[54] or with the god of Assyria, Assur, as suggested by other writers.[55] This problem cannot

[49] See F. Spiegel: *Die arische Periode,* 1887. Also G. Dûmezil: *Les Dieux des Indo-Europeens,* Paris, 1952.

[50] cf. A. Weber in *Indian Antiquary,* XXX, 1901, p. 272.

[51] A. Christensen : "Sur les plus anciennes periodes du Zoroastrianisme," in *Acta Orientalia,* IV, 1926, p. 94.

[52] *Ancient Near Eastern Texts,* ed. J. B. Pritchard, 1955, p. 317.

[53] J. Friedrich: Hethitisches Wörterbuch, 1952, and J. W. Macqueen in *Anatolian Studies,* IX, 1959, p. 180.

[54] e.g. Benveniste: *Vṛtra et Vṛoragna,* p. 46. One correspondence is that the sun and moon are the two eyes of Varuṇa (RV. 8.41.8; 1.72.10) as they are of Ahura Mazda (Yasna. 68.22).

[55] P. Kretschmer: in *W.Z.K.M,* XXXIII, pp. 1–26. R. G. Bhandarkar maintains this position by pointing out that in the Śatapatha Brāhmaṇa and in

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be resolved at present and it would be idle merely to speculate. The name of the Persian god Ahura Mazda is scarcely to be found in the Vedas. The sons of Mahas, heroes of Asura do occur in the Ṛg Veda (III.53.7) but not in a compound form, and only in juxtaposition once. (X.10.2). The point, however, that we wish to establish here is that Asura is not the name of god in the Ṛg Veda, but an adjective and epithet meaning "powerful," and applicable to Indra (I.54.3), Varuṇa (I.24.14), Agni (IV.2,5; VII.2.3), etc. It occurs about 105 times in the Ṛg Veda, and only in 1/7 of these is it used as enemy of the Devas.[56] It is only in the later texts that Asura becomes a hostile and inimical concept in India.

We may now examine the connection between the Vedic Yama and the Avestan Yima. Not only are their own names similar but those also of their fathers. Yama is the son of Vivaswat (Ṛg Veda X.58.1 ; X.60.10) while Yima is son of Vivanghvat according to the Avesta. Yama is conceived as the first man or the "sole existing mortal" (Ṛg Veda X.10.3). Yima too is the first among men with whom Ahura Mazda conversed, and commanded him to further and increase the world. (Vendidad II.1-4). This latter aspect occurs in the Ṛg Veda (X.135,1) where Yama is called "Lord of races, the father."[57] Both are connected with death. Yama is actually called Death in the Ṛg Veda (X.165.4), and the Atharva Veda (XVIII.3,13) confirms that he died the first of mortals. Yima in Persian lore lived in an age when there was neither extreme heat or cold, nor old age nor death (Jamyad Yasht, para. 33). He became mortal only when he was corrupted into telling untruth by Angra Mainyu. (Vendidad. II-6). There is thus evidence that Yama occurs largely in a human capacity in the Vedas as Yima does in the Avesta.[58] Lastly there is

Patañjali the Asuras are regarded not as Aryans but as Mlecchas or foreign barbarians ("The Aryans in the land of the Assurs," in *Journal of the Bombay Branch of the Royal Asiatic Society*, XXV, 1922, pp. 76–81.)

[56] V. K. Rajwade : "Asura," in *Proceedings and Transactions of the First Oriental Congress*, I, 1920, pp. 6–7.

[57] We need not confuse the issue by bringing in Manu who is a "double" of Yama and actually his stepbrother (R. V. VIII, 52. 1). Manu too is the father and leader of men (RV. X. 62. 11) and the progenitor of the human race (RV. I, 45, 68 ; IV. 80, 16 ; III. 3, 6 ; IV. 54, 1).

[58] cf. S. K. Hodiwala : "Jamshed in the Avesta and the Vedas," in *Sir Jamseljee Jejeebhoy Medressa Jubilee Volume*, 1914, pp. 50–7 ; and Dandekar : "Yama in the Veda," in *B. C. Law Volume, I*, p. 209.

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a link between the dogs of Yama described as four-eyed watchers who guard the pathway (Ṛg Veda 10.14.11) no doubt to the underworld, and the two dogs each having four eyes who guard the Chinvat Bridge leading to the next world in the Avesta (Vendidad. 19–29 ; 8.16). The Vedic word for "spotted", *Śabalā*, in reference to Yama's dogs, is undoubtedly related to the Cerberus of Greek mythology, clear proof of a common Indo-Aryan origin.

Again it is possible to show close and striking parallels between the Vedic Mitra and the Avestic Mithra, which makes it clear that the gods are ultimately identical,[59] and that therefore this god like the others was brought into India from outside. Here are the comparisons in summary form :

(1) Mithra gives light just as the Moon does (Yasht. X. 142). Varuṇa and Mitra give light like the Moon (Ṛg Veda III.61.7).

(2) Mithra goes driving each day in a chariot with one golden wheel drawn by 4 white immortal horses having gold and silver shoes (Yasht. X. 125, 136, 143). Mitra and Varuṇa mount the gold-hued car at break of morning (Ṛg Veda V. 62. 8) or ascend their sun chariot into the heavens (Ṛg Veda V. 63. 1, 7).

(3) Mithra makes the plants grow and waters move (Yasht. X. 61). Mitra and Varuṇa cause plants to flourish and rains to spread. (Ṛg Veda V. 62.4).

(4) Mithra is worshipped with Haoma juice after spreading *barsom* grass. (Yasht. X. 31, 32, 91). Mitra and Varuṇa are invoked by worshippers with invitation to sit on *barhis* grass and drink Soma juice. (Ṛg Veda. I.137.3, etc.).

(5) Mithra punishes contract-breakers (Vendidad. IV. 5–10) and his eight friends watch the contract-breakers like spies from high places (Yasht. X.45). Mitra and Varuṇa have spies who visit every spot and watch unceasingly. It has been pointed out that the word for spies is the same in the Avesta (*spaso*) and in Sanskrit (*Spaś*).[60]

(6) The house of Mitra-Varuṇa is thousand-pillared (Ṛg Veda II.41.5) as is that of Mithra's colleague Sraosha (Yasna 57.21), and the compound word for 1000 pillars is the same — Avestan *hazangra stûna* and Vedic *sahasrasthūṇa.*

[59] S. K. Hodivala : "Mitra-Miora," in *Sir Asutosh Mookerjee Silver Jubilee Volumes*, III, 1925, pp. 433–6.

[60] *Ibid.*, p. 434.

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While we are on the topic of identical etymologies we may list a few further examples, showing religious and mythological notions held in common.[61]

Vedic	*Avestic*	*Meaning*
Yajña	*Yasna*	Sacrifice
hotar	*zaotar*	Priests
Āpaḥ	*āpo*	Waters
Vāyu	*vayu*	Wind
apāṁ napāt	*apām napāt*	A deity — son of waters
Gandharva	*Gandarewa*	A deity connected with Soma.

There are also Thrita-Tṛta, Aśvins-Aspinâ, Ushangh-Uṣas, Druḥ-Druj, and other minor deities such as Ārmaiti, Aryaman, Farohars and Pitṛs, Yātu and so on for whom the parallelisms in name and function have been drawn up elsewhere[62] and need not detain us here. We need only remember the striking concurrence in the name assigned to India by the Avesta—*Haptahindu* (Vendidad 1.19) and by the Vedas—*Sapta sindhu.*[63]

With Indra we come to what we consider is the prime deity of the Vedic Aryans, and consequently in establishing his western connections we should proceed with a somewhat more detailed analysis. To begin with we may recall once again that the name Indaruta occurs among the Aryan artistocracy in the Near East, and also that the god Indara was worshipped by the Mitannian kings. Moreover the Hittite language has the root *innar*, from which derives *innara* meaning "strength or vigour."[64] True, Inaras in Hittite myth is a goddess, but there can be no doubt of a common source with Indra in view of the close mythological connection. According to the Hittite version, Inaras aids the storm and weather god to overcome the dragon Illuyunkas, a myth which was celebrated at the *Puruli* Festival of the Earth at the commencement of the dry season.[65] This is obviously a seasonal myth with the dragon personifying drought, and the god vindicating himself as a

[61] A. Macdonell : *Lectures on Comparative Religions*, 1925, pp. 59–60.
[62] S. K. Hodivala : *Indo-Iranian Religion*, 1925, pp. 77–92, 125f.
[63] J. J. Modi : "India in the Avesta," *Asiatic Papers*, Pt. II.
[64] Beneveniste et L. Renou : *Vṛtra et Vṛoragna*, 1934, pp. 84–5.
[65] T. H. Gaster : *Thespis*, 1950, p. 317f.

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bringer of fertility by exercising his powers over the waters of the sky. Indra plays precisely this role in the Ṛg Veda. He whets his thunderbolt (I.55.1), makes streams to gush out (I.54.1) and hews the dragon to pieces (IV.17.7). His opponent is Vṛtra whose etymology may be reduced to vṛ meaning "to hinder, restrain,"[66] a description referring to the "cows" identifiable as thunder clouds (cf. IV.22.4 ; VIII.59.4) who jealously hold back their waters. Another of Indra's opponents is Śuṣṇa, described as *kuyava* "causing bad harvests," and his cloud-castles wander restlessly about (I.103.8 ; VIII.1.28).

The identification of cows with clouds may enable us to recognize in Vṛtra the Orthros of the Greeks. In Hesiod's Theogony Orthros is the hound of Geryon, the stealer of the cows of Hercules,[67] whom the hero destroys, thereby liberating his flocks. The Vedic Vṛtra has his analogue in Iran too, in the Verethraghna of the Avesta, "slayer of enemies" (Yasna. XLIV. 16), though this slayer is not Indra who has been turned into a demon. Indra in the Ṛg Veda (VI. 22-4) is called *asura-han* or "demon slayer."

The Avesta has a hostile serpent, "issue of the river and the winter, work of the Daevas," whom Angromainyus has created in opposition to the Airyana Vaejda of Ahura Mazda (Vendidad. I. 5–8), but there is no clear description of the context and victory. What is certain is that Ahi, who in the Ṛg Veda is functionally identical with Vṛtra,[68] is the same demon who appears as Azhi Dahaka in the Avesta, and we need not hesitate to link them with the Hittite demon Hahhimas who dried up the waters and paralyzed vegetation.[69] The surprising fact is that there is an extraordinary similitude between Azhi Dahaka who is described as three-mouthed, three-headed and six eyed (Bahrâm Yasht, XIV, 40, cf. Yasna IX. 8) and an enemy of Indra called Viśvarūpa who is described as *triśīrsan*, "three headed" and "seven tongued" (Ṛg Veda X. 8. 8) and also six eyed (X. 99. 6). The description of Viśvarūpa would

[66] E. D. Perry : "Indra in the Ṛig Veda," in *Journal of the American Oriental Society*, XI, 1882, p. 135.

[67] G. W. Cox : *The mythology of the Aryan Nations*, 1882, p. 544. In Pauly-Wissowa (*Real-Encyclopädie der classischen Altethumswissenschaft*, 1942–3, Column 1497 under "Orthros") the connection of names is doubted.

[68] cf. I.51.4 ; IV.17.7 ; VI.72.3 ; X.113.3.

[69] T. H. Gaster : *Thespis*, 1950, p. 337f.

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most adequately fit the god of Mohenjodaro who appears on a seal and who is the prototype of Śiva. And there can be no doubt that the cult of Indra must have had to contend with this native god before it could prevail over him. The Dasyus that Indra conquers (VIII. 65. 11) are these native enemies,[70] and they are ensconced in forts (II. 20. 8). Here we may refer to the invocation addressed to Indra to break down the hostile forts, and augment the strength and glory of the Aryans (Ṛg Veda I. 103. 3). We may further recall how Indra helped his suppliants that were on the march to gain one stream after another (I. 131. 5), and how he put to flight barbarian and Aryan enemies and the neighbouring clans (VI. 22. 10).

Despite the similitude of description, there cannot have been the slightest anatomical resemblance between these demons of the Avesta and Veda. Azhi Dahaka must have been a human-headed deity with a pair of serpents rising from his shoulders, as he is represented in Islamic times.[71] Since he is associated with Bawri or Babylon in the Aban Yasht (V. 29), it may be from Babylon that his image was borrowed, and if so we can point to Ningizzida, who is represented in cylinder seals with a pair of serpents stemming from his shoulders.[72]

Careful analysis may enable us to discern further Near and Middle Eastern elements in the Vedic dragon fight. There is firstly *Tvaṣṭar* who fashioned Indra's *vajra* or thunderbolt (Ṛg Veda I. 80. 14 and V. 31. 4). Can he be other than the *Kotarwa-Khasis* of Ugaritic mythology, the craftsman god who gives to Baal, the Rider of Clouds, two clubs to smite his enemy Yamm (Sea)?[73] There is also

[70] In the Avesta, Dainhu means a country or its people.

[71] It is preserved in Firdausi (cf. Carnoy : *Iranian Mythology*, 1917, pp. 320f) and in Persian miniatures, e.g., in MS of 1307, Edinburgh Univ. Library. Arab and Persian MS. 161. fol. 101 ; see Sachau : *Al-Biruni's Chronology of Ancient Nations*, p. 209. II. 11–20, and F. Taeschner : "Zohak", in *Der Islam*, VI, 1915, p. 283f.

[72] E. D. Van Buren : "The god Ningizzida," in *Iraq*, I, 1934, p. 71, pl. IX b, f, c. M. W. Wüst argues that it was the influence of this god that resulted in transforming the triple-headed deity which is essentially of Indo-European origin. ("Germanien," in *Monatshefte für Germanenkunde*, 1940, p. 212f.) This controverts our knowledge that in India the triple-headed god existed prior to the Aryan invasion.

[73] H. L. Ginzberg : in *Ancient Near Eastern Texts*, ed. J. B. Pritchard, 1955, pp. 130–1.

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in this a reminiscence of the Greek Hephaestus, the fire god who made weapons for gods and men.

We will now show that the weapon of Indra cannot have been very different from that wielded by Middle Eastern storm gods and may have been imported from there. True, in a spirit of exaggeration the *vajra* was described as being hundred-edged (VI. 17. 10 ; VIII. 6. 6) or as having a thousand points (V. 34. 2), but elsewhere it is distinctly portrayed as three or four-edged (I. 121. 4 ; IV. 22. 2). On a Sargonid seal from Tell Asmar found in a Temple dedicated to the "Lord of Vegetation,"[74] a seven headed dragon is being attacked by a fertility god armed with a double ended trident. (Note that in Ṛg Veda X. 49. 8 Indra is called *sapta-han* or "killer of seven.") Other cylinder seals have a deity running on the back of a dragon armed with a double ended trident,[75] or shooting a tridentiform arrow from a bow at a dragon.[76] The thunder god carried by Assyrian soldiers of Tiglath-Pileser III has an axe in one hand and a double-ended trident in the other.[77] The god at Sendjirli has the same, only the trident is single,[78] and the same is the case with a Hittite sculpture found at Babylon.[79] A bearded god with trident heads the procession of gods at Boghazkoy.[80] At Malatia, the Hittite deity on a bull grasps a trident and stands before a priest pouring a libation.[81] This must be the storm god since from the treaty of c. 1290 B.C. between Hattusil and Rameses II it appears that the thunder god was the principal deity of the Hittites.[82] The Hurrite pantheon at Yasilkaya (c. 1250 B.C.) has on the left of the procession the storm god Teshub with trident while behind him evidently is his image, the Teshub of Hattusa, god of grains.[83] Every thunder god

[74] H. Frankfort : *Cylinder Seals*, 1939, pl. XIIIj, pp. 121–2.

[75] W. H. Ward : *Seal Cylinders of Western Asia*, p. 201, Fig. 579.

[76] *Ibid.*, Fig. 570, p. 199.

[77] Perrot and Chipiez : *Histoire de l'Art dans l'Antiquite*, II, p. 76 ; Layard : *Monuments of Nineveh I*, p. 65.

[78] K. Humann and B. Puchstein : *Reise in Kleinasien und Nord Syrien Atlas*, pl. XLV. 3 ; and *Ausgrabungen zu Sendschirli*, III, 1902, p. 218, pl. 41, Fig. 114.

[79] L. Messerschmidt : *The Hittites*, 1903, Fig. 6, pp. 40–2.

[80] J. Garstang : *The Land of the Hittites*, 1910, p. 196f.

[81] *Ibid.*, pp. 138, 359, pl. XLIV. [82] *Ibid.*, pp. 347–9.

[83] cf. E. Laroche : in *Journal of Cuneiform Studies*, VI, no. 3, pp. 115–123, esp. p. 116.

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is also a fertility god ; for example at Baalbek the image of Haddad grasped a thunderbolt and ears of corn.[84] The dual nature is clearly evident in the case of Indra. In the Ṛg Veda (I. 165. 8) he is made to say "I slew Vṛtra . . . . I who held the thunderbolt in my arms, have made these all-brilliant waters to flow freely for man." In the epilogue to this Hymn the sacrificers pray : "May we have an invigorating autumn with quickening rain." (I. 165. 15).[85]

At this point we will be so bold as to identify a schematized deity on a pottery from Harappa (c. 1600 B.C.)[86] as the god Indra. The figure holds a pair of cows by their noserope, while toward one he directs an arrow from a bow. The hair of the god crinkles up and stands on end like lightning. Below is a cow with a trident set up between its horns which we take to mean the cow (cloud) conquered by the god.[87] The only parallel to the figure of the god that we know is a Near Eastern thunder god holding a pair of lances resting on socles.[88] Should our identification be accepted important consequences must ensue, such as making us aware that in some cases at least the Vedic Aryans were not averse to making representations of their deities, though there is only one stray reference to an Indra image in the Ṛg Veda (IV. 24, 10). In the example cited we also have the first attested instance of the trident in India. It is questionable whether the trident survived in India as a religious symbol, since in the next earliest example of which we are aware, that of Śiva holding one on a coin of Kadphises II,[89] there is a possibility of Graeco-Bactrian influence.[90] In the Mahābhārata (XIII. 860f.) Śiva's *śūla* (spear) is described as having exceedingly sharp points

[84] Macrobius : *Saturn*, I.23.12 and 17–19. J. Frazer : *Adonis, Attis and Osiris*, I, 1936, p. 163.

[85] Thus the reference to the slaying of the dragon prior to the rainy season connects it with the similar seasonal Hittite myth celebrated at the Puruli festival.

[86] Vats : *Excavations at Harappa*. And S. Piggott : *Prehistoric India*, Fig. 29.

[87] The figure carrying a thunderbolt with his elephant before him on a handled-amphora recently excavated in Lahore Fort, is independently suggested to be Indra (A. B. Rajput : in *Dawn Independence Day Supplement*, August 14, 1960).

[88] R. Dussaud : in *Syria*, XVI, 1935, Fig. 17, p. 386.

[89] P. Gardner : *Catalogue of the Coins of the Greek and Scythic Kings of Bactria and India*, 1886, p. 124, pl. XXV, 7, 12.

[90] e.g. Poseidon holds trident on coin of Antimachus (*ibid.* p. 12. pl. V. 1). Also Pallas hurls double-ended trident on coin of Menander (pl. XI. 7).

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and is compared to a frowning brow with three wrinkles. In another passage (III. 14, 551) Rudra's sharp, three-edged *śūla* is called the victorious.[91] The later history of the trisula in India does not concern us, but we cannot refrain from quoting an 11th century Muslim writer who says that Hindus committed suicide by throwing themselves on tridents by the banks of holy rivers.[92]

Any kinship or correspondences that we might discover between the Vedic Aryans and their opposites outside India would be acceptable as a matter of course. It is on the other hand more difficult to conceive an influence of Semitic Mesopotamia on the Aryan migrants. There is a distinct possibility, for example, that they borrowed the superior type of plough of the Babylonians, which, as is known from cylinder seals, had a fitted tube for seeds enabling ploughing and sowing to take place simultaneously. The Vedic word *sīram* is held to have been such a plough-sower.[93] In their very beliefs in the origin of the world we can trace a close parallel. Ṛg Veda X. 90 claims that the world originates from the body of a primaeval giant whom the gods sacrificed. His head became the sky, his navel the air, his feet the earth. In the myth of the Accadians of Mesopotamia the Enuma Elish (IV. 138) Marduk deputizing for the remaining gods slew the primaeval monster Tiamat, and with half of her body made a sky. Marduk has exactly the same weapons as Indra, the lightning, the bow and arrow, and a net.[94] Tiamat is of course the personification of the Deep, the inchoate waters before creation, but there is at least a superficial parallel in the statement of the Ṛg Veda V. 30. 6, that Indra overcame the lurking dragon which lay upon the water. It has in fact been suggested that Apsujit in Ṛg Veda VIII. 13. 2 as another name for Indra signifies the "conqueror of Apsu," Apsu being the husband of Tiamat.[95] Both in the Avesta (Yasht 5. 37. 8 ; 15. 28) and in the Ṛg Veda (8. 66. 5, 10. 10. 4) there is a demon of the deep who is

[91] Cited by C. Blinkenberg : *The Thunder weapon in Religion and Folklore*, 1911, pp. 114–5.

[92] *Marvazi* : tr. V. Minorsky, 1942, p. 140.

[93] J. Bloch : "La Charrue Vedique," in *Bulletin of the School of Oriental Studies*, VIII, 1935–7, pp. 411–18.

[94] cf. Enuma Elish. IV. 38–9, 41. And Ṛg Veda V.31.4 ; VIII.45.4 ; X.103.2, 3 ; IX.83.4.

[95] D. R. Bhandarkar : *Some Aspects of Ancient Indian Culture*, 1940, p. 32. Can the Anus who prepared Indra's chariot (RV V. 31. 4) refer to the god Anu ?

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slaughtered by a god — Gandareva is slain by Kereshaspa and Gandharva by Indra — the name of the victims clearly signifying a common source.

Finally we may claim that we have found the Maruts who protected Indra in his struggle with Vṛtra (Ṛg Veda VIII. 7. 24) as far west as Anatolia. On the rock sculpture at Malatiya,[96] Teshub accompanied by the mortal hero Hupasyas, advances toward the dragon Illuyunkas, while a number of figures emerging from the sky cast down hail stones on the adversary. These we contend are the Maruts who are described in the Ṛg Veda as hurling stones (I. 172. 2), whirling hail and shooting thunderbolts (V. 54. 3), crunching cattle like a well-aimed thunderbolt (I. 166. 6), shaking the heavenly bucket (V. 59. 8), helping Indra to dissipate the clouds (I. 59. 6), and treading Vṛtra to pieces (VIII. 7. 23). It is no wonder that their name Mar-ut is claimed to derive from the root *MAR* in the sense of grinding, crushing, pounding.[97]

It is unanimously admitted that there is a common conception in the cultic beverage *soma* of the Vedas and *haoma* of the Avestas.[98] May we dare propose a connection with the edible *andahsum* plant of the Hittites which played so important a role in a festival in which sacrifices and libations were made to the gods ?[99] We leave this for others to decide ; meanwhile we will note some detailed resemblances between the Avestic and Vedic plants : in both spheres they are described as the king of plants growing on mountains (with their mythical home in heaven) and brought from there by birds. In both the sap was pressed and mixed with milk, in both they are conceived as a kind of medicine bestowing long life and removing death, in both there is a distinction between the terrestrial and the celestial drink, and both share some individual epithets in common.[100] Finally both the Ṛg Veda and the Avesta agree in the names of the ancient preparers of the drink — Soma, Vivasvat and

[96] Garstang : *op. cit.*, 1929, Fig. 17, pp. 206–7.

[97] M. Müller : *Vedic Hymns* : *Sacred Books of the East*, vol. 32, 1891, p. XXIV.

[98] A. de Gubernatis : *Mythologie des Plantes*, I, pp. 93–8. See also G. Mukhopadhyaya : *History of Indian Medicine*, 1923, I, p. 189f.

[99] O. R. Gurney : *The Hittites*, 1954, p. 153. For possible identification of the plant see R. Campbell Thompson : *A dictionary of Assyrian Botany*, 1949, pp. 93–4. For the festival connected with the plant see now H. G. Güterbock: in *Journal of Near Eastern Studies*, XIX, no. 2, 1960, pp. 80–9.

[100] Macdonell : *Sanskrit Literature*, pp. 98–100.

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Trta Āptya on the one hand, and Vivanghvat, Āthvya and Thrita on the other.[101]

At first glance one would not have expected the so characteristic Caste System of India to have been prevalent outside it. But that was in fact the case. From the Avesta it appears that the Airyas of Iran divided themselves according to their professions (Yasna, XIX. 16–17). There they are listed as (*i*) The Āthravans or priests — from *âtar*, "fire" and *van* "to venerate," thus "one who takes care of fire." (*ii*) Rathaêshtârs or warriors — from *ratha* "chariot," and *stâ* "to stand," that is literally one who stands in the chariot. (*iii*) Vâçtrya or agriculturists from *vāstra* meaning "pasture," and (*iv*) The Hûiti, the artisan class — from *hu* "to prepare" (things). These of course correspond to the four Castes (*Varṇa*) in the Hindu Code of Laws attributed to Manu, that is the Brahmins, Kṣatriyas, Vaiśyas and Śūdras. There are traces already in the Ṛg Veda of the three-fold (VIII. 35. 16–18) or four-fold (I. 113. 6) division of the people into *brahma, kṣatram*, and *viśaḥ*, or into the three classes and the servile population.[102] Firdausi says it was Jamshed (Yima Xsāeta) who first divided the people into the four professional classes. He gives their names as Kâtuziân, Nīsaryan, Nasudi, and Ahnukhushi.[103] Al Thaalibi enumerates the four classes founded by Jem as warriors, priests and doctors, scribes and calculators, commercial and artisans.[104] Mirkhond has a similar list of social subdivision based not upon aptitude but on livelihood, though he replaces the scribes by agriculturists.[105] It is interesting to note that Ardashir Papakan, founder of the Sassanian dynasty, forbade the people of one profession taking up another without the permission of the state, and his minister justified it on the ground that this division was good for the preservation of order among people.[106]

[101] Macdonell: *Vedic Mythology*, pp. 113–4.

[102] A. A. Macdonell and A. B. Keith: *Vedic Index of Names and Subjects*, 1912, II, pp. 250–1.

[103] Vuller's Ed., Vol. I., p. 24.

[104] *Histoire des rois de Perse*, tr. H. Zotenberg, 1900. p. 12.

[105] E. Rehatsek: *Rauzat us Safa*, 1892, Pt. I, Vol. II, p. 231.

[106] See further G. Dumezil: "La préhistoire indo-iranniene des castes," in *Journal Asiatique*, 1930, i. pp. 109–30; E. Beneveniste: "Les classes sociales dans la tradition Avestique," in *ibid.*, 1932, ii. pp. 117–38; and J. J. Modi: "Was there any institution in Ancient Iran like that of Caste in India?" in *Anthropological Society of Bombay*, XIII, no. 8, pp. 1–7. The

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Archaeologically the early period of Aryan domination in India is a very impoverished one. One implement they did introduce from outside was the shaft hole axe. That found at Jhukar, whose culture replaced that of Harappa, has an exact parallel at Hissar XII in North Iran.[107] This enables us to imagine the route the Aryans took in their migration to India.

tripartite social division into priests, warriors, and agriculturists did not exist only in Avestic Iran and in post Vedic India, but also among other Indo-Europeans including the Scythians, Ionians, pre-historic Romans, and among the Celts of the time of Caesar. (G. Dumézil: *L'idéologie tripartite des Indo-Européens*, 1958.)

[107] *Ancient India*, III, p. 82.

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Chapter III

POST-VEDIC, PRE-PERSIAN INFLUENCES IN INDIA

The cotton tree was introduced from India into Assyria (c. 700 B.C.) by Sennacherib (704–681 B.C.), who is reported to have said that trees that bear fleece were sheared and shredded for garments.[1] He had a fleet built on the Persian Gulf by Phoenician carpenters, and in 695 B.C. had sailed against the Babylonian king Merodach Baladan who in turn had sailed off to Magitu on the coast of Elam.[2] Their purpose served, the ships may then have been used for trade, one consequence of which may have been the importing of the cotton tree, possibly rice,[3] and also of peacocks from India. The Jātaka stories relate that Indian merchants travelled to the land of Baveru (Babylon) and took the first peacock there.[4] These tales are of uncertain date but there is reason to believe that they refer back to the 6th century B.C., or earlier, since peacocks were already known to Aristophanes (died c. 380 B.C.) and perhaps to the compilers of the Biblical books referring to Solomon's imports from Ophir. The latest date suggested for this event is 480 B.C. since intercourse between India and Babylonia diminishes after Darius[5] (but we shall see that relations continued under Xerxes and Darius III). The earliest date may be 738 B.C., when there is a possible reference to a peacock among the wonderful birds received as tribute by Tiglath Pileser III.[6] It is unlikely that peacocks were imported by Solomon in the 10th century B.C., when according to

[1] L. W. King: in *Proceedings of the Society of Biblical Archaeology*, 1909, pp. 339–43.

[2] G. Maspero: *Histoire Ancienne*, 4th ed., 1886, pp. 442–3.

[3] Since the word for rice *kurangu*, related to the Persian *gurinj*, appears in Mesopotamia about this time. (R. C. Thompson: *A Dictionary of Assyrian Botany*, 1949, pp. 106–107).

[4] Translated by Rhys Davids, IV, 7, and tr. Cowell and Rouse, 1907, III, p. 83.

[5] J. Kennedy: "The early commerce of India with Babylon" in *Journal of the Royal Asiatic Society*, 1898, pp. 268–9.

[6] Meissner: *Babylonien und Assyrien*, I, pp. 223, 353.

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I Kings 10.22, the Phoenician fleet brought back from Ophir gold, silver and what is usually translated ivory (*Senhabbīm*), apes (*qophīm*) and peacocks (*thukkiyyīm*). Thukkiyyīm, it is suggested, may have been added to the Hebrew text after the 6th century B.C., and in any case there is no evidence that the word meant "peacocks."[7] Josephus (Ant. VIII. 7. 2) identifies Ophir with India in the first century A.D., but though he translates ivory and apes he does not have peacocks. The Ṛgvedic word is *mayūra* and does not interest us (the Baveru Jataka has *mora*), but the Dravidian for peacock, *toka*,[8] does seem to be the same word as the Hebrew and so does the Greek equivalent *tavos*. However, the identification of Ophir with an Indian port is far from being proved by this one resemblance. The word for monkey, it is similarly argued, is of Dravidian origin, *kapi* of which the Egyptian is *gofe*, Greek, *kebos*, and Biblical *qôph*.[9] The antiquity of the Dravidian word is by no means certain, but on the other hand we know that as early as the reign of Queen Hathshepsut (c. 1500 B.C.) an Egyptian expedition to Punt on the Red Sea coast brought back apes and monkeys.[10] Solomon must have known of these Egyptian expeditions since he was married to an Egyptian princess. In fact it is probable that Solomon too like Hathshepsut brought back apes in addition to monkeys, for it has been suggested that *thukkiyyīm* is really the Egyptian word for ape, *ky*, with the feminine article prefixed.[11] Another seemingly Indian product among Solomon's imports from Ophir is stated by the Bible to have been *almug* (I Kings 10.11–12) but the translation of it as sandalwood is nothing more than a modern guess. The attempt to derive *almug* from the Indian *valguka* has nothing in its favour, since sandalwood is unknown to the Ṛg Veda and the earliest Sanskrit word for it is a quite different one, *candana*.[12] It is conceivable that the Sanskrit *ibha* for elephant may be the same word as the Egyptian word for elephant *'bw*, but it

[7] W. E. Clark: "The Sandalwood and Peacocks of Ophir," in *American Journal of Semitic Languages*, XXXVI, 1919–20, pp. 103–119.

[8] Caldwell: *Grammar of Dravidian Languages*, p. 91.

[9] Hewitt in *Journal of the Royal Asiatic Society*, 1889, p. 188f.

[10] J. Breasted: *Ancient Records of Egypt*, II, p. 109.

[11] W. F. Albright: *Archaeology and the Religion of Israel*, p. 212, n. 16.

[12] W. E. Clark: *loc. cit.* The Tamil *agil* should not be brought in here as it is aloes wood not sandalwood (But see R. D. Barnett: *The Nimrud ivories*, p. 59, n. 10).

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would be presumptuous in the present stage of our knowledge to claim a priority for the Indian word as do some authors[13] in view of the fact that the Egyptian word is attested both in the Old and Middle Kingdoms.[14] These negative conclusions must be borne in mind by Indian historians before they make confident claims that trade contacts were established between India and the Near East in the 10th century B.C.[15]

It may have been that the Indian merchants visiting Mesopotamia in the late Assyrian or neo-Babylonian period took back certain mythological features and incorporated them in their religious books. In the Atharva Veda (V. 13) a charm is pronounced against the serpent Taimāta daughter of Urugūlā. One writer has proposed to identify Taimāta as the primaeval creature of chaos, Tiamat, and Urugūlā as *uru gal* "the great city" in the Sumerian language (not Accadian). Moreover the Āligī and Viligī described in the same passage as the father and mother of Taimāta are suggested to be the corruptions of the gods Bel and Bel-gi.[16] There does not seem to be any evidence that Tiamat was pictured as a snake by the Babylonians themselves, but the figure of another female snake-like creature could be explained as a borrowing by India. At the Barhut stūpa and elsewhere there are representations in relief of a serpent-tailed female figure.[17] She would correspond to the mother goddess Nin-tu, the upper part of whose body was that of a naked woman, and the lower part was said to be scaly like the skin of a snake. She was represented suckling her babe at the left breast. Votive clay figures of her excavated in Assyria were offered to her by devout but barren women who desired offspring.[18] At any rate in

[13] H. Heras: *Studies in Proto-Indo-Mediterranean Culture*, 1953, See "Introduction."

[14] Komorzynski in *Archiv fur Orientforschung*, XVI, 1952-3, 263.

[15] e.g. Majumdar says: "The use of these Indian names for merchandise raises a strong presumption in favour of their Indian origin." (*The Age of Imperial Unity*, ed. R. C. Majumdar and A. D. Pusalker, 1951, p. 612).

[16] B. G. Tilak: "Chaldean and Indian Vedas," in *R. G. Bhandarkar Commemorative Volume*, p. 32f. Note that the name of the god Gibil is written Bil-gi.

[17] J. P. Vogel: *Serpent Lore*, p. 39; and F. D. K. Bosch: *The Golden Germ*, 1960, p. 200, pl. 70a.

[18] (BM. nos. 91853–91854) R. C. Thompson: *The Devils and Evil Spirits of Babylonia*, 1904, II, p. XIV.

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Mesopotamia the uniped snake god is known on seals already in the Accadian period,[19] while the figure appears in China by the 4th century B.C.[20] One aspect of Ishtar's story has an Indian parallel which may be a remote borrowing. It is the seven times compulsory undraping of Ishtar in her descent into the underworld. This is both related in myth and portrayed on seals.[21] In the Indian story as told in the Mahābhārata, Karṇa repeatedly tears the garments off Draupadī but each time Dharma covers her with another.[22]

The device of the *vāhana* or vehicle bearing gods in Indian art is suggested to have probably been derived from the Babylonian representation of gods standing on animals and denoting their realm or power.[23] It may be possible to pin down the actual stages of this borrowing. In cylinder seals Ishtar frequently has a lion vehicle.[24] Later the Syrian goddess Kadesh is represented on Egyptian monuments standing on a lion.[25] Still later the Syrian goddess Atargatis was according to Lucian (*De dea Syria*, 31) and Macrobius (*Saturn*, I, 23.19) portrayed seated on lions, and is in fact so represented on coins.[26] On a coin of Sapaleizes the name Nenaia is associated with a lion.[27] Thereafter according to Hindu iconography Ambā has also a lion as her *vāhana* and is seated on it.[28] If the transmission of the motif did take place in the rather simplified fashion here delineated, then of course we must assign the borrowing to a later period than that covered by this chapter. But we must always allow for the possibility that the motif was copied from an imported art object. The only such Assyrian object known to us in

[19] H. Frankfort: *Cylinder Seals*, p. 120, Pl. XXI b, f.

[20] Przlyuski: in *Melanges Chinois et Bouddhiques*, 1933, 2, p. 307.

[21] W. H. Ward: *Seal Cylinders*, pp. 266, 296–302; and G. Contenau: *La gliptique Syro-Hittite*, nos. 136, 138, 156, 141, 311.

[22] See S. Sörensen: *An Index to the names in the Mahabharata*, 1904, I, p. 258a; M. Winternitz (*A History of Indian Literature*, 1927, I, p. 344, n. 2) considers the miracle of the garments to be a late interpolation.

[23] H. Zimmer: *The Art of Indian Asia*, 1955, I, p. 42f.

[24] e.g. M. de Vogüé, *Melanges d'Archéologie Orientale*, 1868, p. 46, who also refers to the Tanit or Artemis of Carthage mounted on a lion, and the goddess in the temple of Bel at Babylon mentioned by Diodorus (II. 9).

[25] cf. Max Muller: *Asien und Europa*, p. 314f.

[26] B. V. Head: *Historia Numorum*, 1887, p. 616.

[27] B. N. Puri: in *Indian Culture*, VII, 1940, pp. 492–3.

[28] T. Gopi Natha Rao: *Hindu Iconography*, I, Pt. 2, p. 358.

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India is an onyx seal found at Sirkap engraved with an Assyrian worshipper before a winged human-headed scorpion.[29]

Any mythological elements that may have found their way from Babylonia to India would however be more likely to fall into this period than any other. It is true that the counterpart of the figure of Enkidu is found already in the Indus Valley long before, but it is not necessary that the story attached to the figure travelled with it. We may now bring to the reader's notice that a portion of his story is found in the popular Indian tale of "Gazelle horn" in Sanskrit and Pali recensions. Ṛśyaśṛṅga is the son of a gazelle, a hermit in the forest associating with animals and ignorant of women. A courtesan seduces him from his ascetic life.[30] There is undoubtedly an astonishingly close resemblance here to the half animal creature Enkidu being seduced from his life in the wilderness by the woman of the temple Samhat. According to a fragment from Sultantepe Enkidu's mother too was a gazelle.[31] It occurs to us that a further episode in the Enkidu legend may also have migrated. This is the slaying of the terrible Humbaba in the cedar forest by Enkidu and Gilgamesh. The Indian story as told in the Mahābhārata is that the horrible man-eating giant Hidimba who lurks near a banyan tree is slain by Bhīma.[32] Later we will have occasion to point out yet another parallel in the Gilgamesh story to an Indian myth.

Finally we ourselves do not have the slightest doubt that the Babylonian story of the Flood has inspired the Indian story as found in the Śatapatha Brāhmaṇa.[33] Manu, like Utnapishtim, is warned of the impending Flood, advised to prepare a ship, and after the deluge descends on a mountain. The fish which saves Manu corresponds to the ichthyomorphic god Ea who saves Utnapishtim.[34]

[29] *Archaeological Survey of India. Report*, 1923–4, p. 66, Pl. XXVII. 6.

[30] W. F. Albright : in *Journal of the American Oriental Society*, vol. 40, 1920, pp. 229–30.

[31] O. R. Gurney : in *Anatolian Studies*, II, pp. 126–27.

[32] For resume of story see M. Winternitz : *A history of Indian Literature, I*, 1927, p. 332.

[33] *Sacred Book of the East*, XII, tr. J. Eggeling, p. 216f and Max Muller : *History of Ancient Sanskrit Literature*, p. 425.

[34] cf. Lenormant : *La legende de Sémiramis*, p. 33f ; and *The Beginnings of History*, p. 424f.

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Finally after the deluge Manu sacrifices to the waters as Utnapishtim sacrifices to the gods.[35]

Stepped battlements in the representations of walls and square towers on the Northern Gateway at Sāñchī are derived from Assyria or Persia,[36] but it is impossible to decide which. A sandstone head with a crenellated crown upon it from Sārnāth[37] would seem to suggest that it was borrowed from that of Darius at Bisitun.[38] At any rate tiered shrines[39] are claimed to be based on ziggurats, the very word for which seems to have been incorporated in the Sanskrit *Jārūka* or *Aiḍuka*.[40] In the Mahābhārata it is prophesied that "men in the decadent age of Kali will forsake their own gods and worship the *eḍūkas* ; the earth will be dotted over with *eḍūka* monuments in place of the temple of gods." In one Purāṇa the *eḍūka* is a terraced temple in three tiers with a Śiva liṅga at its top, an example of which was excavated at Ahicchatra.[41]

The description of seven-coloured fortifications in the royal city of Kuśavatī, the city of King Sudassana,[42] seems to be a reflection of the Median city Ecbatana built by Deioces (c. 700 B.C.). Herodotus (I. 98) describes Ecbatana as having seven circular walls, with the colour of the battlements based on the constellations : the outermost white, followed by black, purple, blue, scarlet, silver and gilt. The treasury and the palace were in the centre. This description of Herodotus who wrote in c. 440 B.C. has been regarded by one writer as legendary since Polybius' description (X. 27, 6) of the real city in 209 B.C. suggests that it was a wall-less city with only a citadel.[43]

[35] Suryakanta Shastri (*The Flood legend in Sanskrit Literature*, 1950, p. VII) comes to the fantastic conclusion that the Indian version is antecedent to the Babylonian since the greater variety of details and embellishments of the latter are a sign of lateness. On the contrary every detail of the Babylonian story is true to life while the story of the big fish in the Indian version sounds like a fisherman's yarn. [36] J. Fergusson : *Tree and Serpent Worship*, 1873, p. 147, Pl. XXXIV. [37] L. Bachhofer : *Early Indian Sculpture*, 1929, I, Pl. 13.

[38] O. M. Dalton : *The treasure of the Oxus*, Fig. 40.

[39] Coomaraswamy : *History of Indian and Indonesian Art*, Figs. 69, 69A.

[40] V. S. Agarwaal : "Some foreign words in Ancient Sanskrit Literature, in *J.U.P.H.S.*, XXIII, 1950, p. 151, and U. P. Shah : *Studies in Jaina Art*, 1955, p. 123f, 151–2. [41] V. S. Agarvala : in *Ancient India*, no. IV, p. 167.

[42] Buddhist Suttas, tr. Rhys Davids, *SBE*, XI, 1881, p. 249.

[43] The probable site of the Ecbatana Citadel is the Musullah Hill of Hamadan (A. V. W. Jackson : *Persia Past and Present*, 1906, p. 154f). Ecbatana became the Achaemenid Kings' Summer capital. (Xenophon : *Cyropaedia*, VII. 6. 22.)

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But it is not quite correct to add that the Iranian towns represented in Assyrian bas-reliefs only have up to three walls[44] (already Naramsin c. 2200 had built three concentric walls on a tell).[45] Kisesim for example is distinctly represented as a four walled town, one rising higher than the next.[46] This city Kisesim was added to the Assyrian Empire in 716 B.C. and taken by the Medes in 680 B.C. Nor is it quite convincing that Herodotus made historical the Babylonian doctrine of the seven planets and their metals and applied it to Ecbatana. The probability is that there was a real tradition in early Iran for such symbolical representations, for the notion survives later in the Ayātk Zām (Messina) of the seven walls of Kangdiz consisting of iron, copper, steel, bronze, lapis, silver and gold. The same tradition seems to be reflected in Muqaddasi's citation of a Persian source in the 10th century A.D. that God created the world's heaven of green emerald, white silver, ruby and so on up to the seven heavens with their names and substances.[47]

We may also compare the Hindu conception of the Underworld as represented in the Purāṇas. First of all we may remark that the Underworld *Pātāla* is a seven storied staged building.[48] In other words it is tiered like the Babylonian ziggurat, and specifically it has seven *pātāla*, just as the Underworld to which Ishtar descends has seven gates. Each of the seven stages have different colours. The Viṣṇu Purāṇa describes these as black (*kṛṣṇa*), white (*śukla*), red (*rakta*), yellow (*pīta*), a pebbly colour (*śarkara*), silver (*śaila*), and gold (*kāñcana*).

In Babylonia the seven staged ziggurat is known from literary sources, and it is possible that each stage was dedicated to a different deity. The evidence for this is as follows : At Lagash the Temple of Gudea the *E-Pa* was the Temple of Seven Zones.[49] Not far away at Erech was another Sumerian temple called *E-ur-imin-anki* "House of the Seven rulers of heaven and earth."[50]

[44] E. Herzfeld : *Archaeological History of Iran*, 1935, p. 14, Fig. 3.

[45] Gadd and Legrain : *Ur Excavation Texts*, I, no. 275, Pl. 56, p. 74 ; F. R. Kraus : in *Iraq*, X, 1948, Pt. 2, p. 81f.

[46] E. Herzfeld : *Zoroaster and his World*, II, 1947, pp. 806–7. Also see Mahmud El Amin in *Sumer*, IX, 1953, no. 1, pp. 54–5.

[47] Aga Oglu : in *Journal of Near Eastern Studies*, V, no. 4, 1946, pp. 245–6.

[48] W. Kirfel : *Die Kosmographie der Inder*, 1920, pp. 24*, 35* and 143.

[49] A. Parrot : *Ziggurats et tour de Babel*, 1949, p. 17.

[50] Thureau-Dangin : *Die Sumerischen und Akkadischen Königsinschriften*, 1907, p. 142.

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In the Sumerian version of the Gilgamesh legend there is a mention of seven mountains.[51] The scheme appears later in the description of the Persian cosmogony where the world is divided into seven Keshwars, the mountain Tireh in the centre of the world (Bundahish, ch. XI. XII). This corresponds exactly with the Dvīpa system mentioned in the Mahābhārata, (VI. 155).

Apart from the seven coloured fortifications of Kuśavatī, Fa-hsien the 4th century Chinese pilgrim describes the Buddhist stūpas of India as covered with seven precious substances. One scholar identifies these as gold, silver, lapis lazuli, crystal, ruby, emerald, and coral.[52] The idea persisted well into the 15th century in India. Abder Razzak from Herat sent by Shah Rukh in 1442 says the city of Vijaynagar had seven citadels and walls enclosing each other. There were seven doors to the king's apartments, and they carried before the Prime Minister seven parasols of different colour.[53]

[51] S. N. Kramer : in *Journal of the American Oriental Society*, 64, 1944, p. 14.
[52] A. Cunningham : *The Bilsa Topes*, 1854, cited by W. R. Lethaby : *Architecture, Nature and Magic*, pp. 68–9.
[53] *India in the 15th Century*, tr. R. H. Major, 1857, p. 23f.

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Chapter IV

INDIAN RESPONSE TO PERSIAN IMPERIALISM

The first invader to make military incursions toward India was Cyrus (558–30 B.C.). Herodotus says (I, 153, 177) he conquered up to Gandaritis or Gāndhāra. Xenophon (*Cyropaedia* I. 1, 4) goes further and says that Cyrus brought under his sway Bactrians and Indians, and that an embassy brought tribute to him from an Indian king (*ibid.*, VI. 2, 1–11). Cyrus must have made an attempt to subdue India since we are told by Nearchus, as reported by Arrian (*Anab.* VI. 24, 2–3), that the Gedrosia (Baluch) desert came in his way and there his whole army perished.[1] According to Pliny (VI. 23) Cyrus destroyed Kapisa, a city in the upper region of the Kophen (Kabul). If Arrian is to be believed (*Indica*, I. 1–3), the land between the Kophes and the Sindu had already been inherited by Cyrus from the Assyrians and Medes. We learn from Ctesias (frag. 37, ed. Gilmore), the physician to the Persian court, that Cyrus himself died of a wound inflicted by an Indian who was among the company of soldiers allied to Derbices east of the Caspian Sea. But the death of Cyrus in this manner and at this place is contradicted by Herodotus (I. 214) and by Xenophon (*Cyrop.* VIII. 7, 3–38).

Firdausi (c. 1005 A.D.) in his romantic poem the *Shahnama* relates that Persian kings such as Kaikubad laid claim to the country from Zabulistan (Arachosia) to the Sea of Sind, and Kai Khosro held territory from Kanauj to Sistan.[2] It seems that Darius' Empire did not go beyond Arachosia or Central Afghanistan when he mounted the throne in 522 B.C.[3] In fact his Bisitun Inscription (c. 520–518 B.C.) does not mention India as a Persian province but only Gāndhāra.[4]

[1] Elsewhere Arrian (*Indica*, IX. 10) denied that Cyrus invaded India, though he marched against the Scythians.

[2] A. V. W. Jackson: "Notes and Allusions to Ancient India in Pahlavi Literature," in *Festschrift E. Windisch*, 1914, p. 12.

[3] V. de St. Martin: *Etude sur la Geographie Grecque et Latine de l'Inde*, p. 14f.

[4] Rawlinson's *Herodotus*, II, p. 593, and *Journal of the Royal Asiatic Society*, X, p. 294.

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However, since his inscriptions at Persepolis (c. 518–515) and Nakshi-Rustum (c. 515) do mention Hi(n)du[5] (the regions east of Gāndhāra probably corresponding to Sind), the conclusion must be that he conquered these parts of India in about 518.[6] Independent of Darius' inscriptions we have Herodotus' account (III. 94) that the tax paid in the form of gold dust from the Indian provinces because of its large population far exceeded that paid into the Persian treasury from other sources. Indian tribute bearers bringing two pairs of jars (filled with gold dust?) are identifiable in the sculptures at Persepolis.[7] Also among the 28 supporters of the dais carrying the enthroned Achaemenid king are easterners identified as Sattagydian, Gandarian, Indian, and Macian.[8] It is likely that the sea trade received a stimulus after the forming of the Hindush satrapy for we find a Hindu woman named Busasa keeping an inn at Kish under police supervision.[9] Herodotus reports (IV. 44) that a naval expedition was despatched by Darius in 512–10 under the Greek Skylax of Karyanda to explore the mouth of the Sindu or Indus. This fleet embarked from somewhere in Gāndhāra, sailed down to the Indian Ocean and arrived in an Egyptian port two and a half years after setting out. Herodotus may have obtained this information from Skylax himself, for he knows of the crocodiles in the Indus (which are still there), of the garments of wild cotton worn by the Indians, and of the dense population of the land.

We learn again from Herodotus (VII. 65) that Xerxes (486–65) employed Indian soldiers (Hydrakai possibly equivalent to Kṣudraka) in his battles against Greece. They were clad in cotton garments. There were also Indian chariots drawn by horses and wild asses and a large number of dogs (Herodotus, VIII. 113, IX. 31). Together with the Persians under Mardonius they suffered defeat at Plataea in 479 B.C. The Biblical Book of Esther (I. 1) counts Hoddu or India as among the 127 provinces of Ahasuerus, and this king reigning in Susa has been identified as Xerxes, since in the

[5] *Journal of the Royal Asiatic Society*, X, p. 294.

[6] F. Sarre and E. Herzfeld: *Iranische Felsreliefs*, pp. 106–7; *Cambridge History of India*, I, p. 335; and Herzfeld: "A new inscription of Darius from Hamadan," *A. S. I. Memoirs*, no. 34, 1928, p. 2.

[7] E. F. Schmidt: *Persepolis*, I, 1953, p. 89, Pl. 44.

[8] *Ibid.*, pp. 117, 138, 281, Pls. 80–81.

[9] A. T. Olmstead: *History of the Persian Empire*, 1959, p. 145.

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Persian column of his trilingual inscriptions he is called Khshyarsha.[10]

After Xerxes, the next confirmed contact between Persia and India occurs during the time when Ctesias was court physician to Artaxerxes Mnemon (418–398 B.C.) at Susa. He reports that a tiger was sent to the Persian king from India (cf. Pausanias IX. 21, and Aristotle: *Hist. Anim* II. 1). Finally Arrian attests (*Anab.* III. 8, 3–6) that Darius III resorted to Indian troops and elephants in an effort to resist Alexander at Arbela in 330 B.C.

Some results of the Achaemenid contact with India may now be considered. It is probable that it was through the Aramaic scribes of the Achaemenids that the Kharoshṭhī system of writing entered India (as against the Brāhmi script which also has Semitic affinities). Had not Cambyses introduced Aramaean as the language of administration in Egypt when he conquered it in 525 B.C.?

The resemblance between the name of Cyrus as it is known in cuneiform inscriptions (Kyros, Kuras, Kurush) and Kharoshṭhī (meaning "ass' lips") has been noted, and the suggestion made that Cyrus introduced writing into India.[11] (Note however that Nabonidus accused Cyrus of being an illiterate "who knows not the imprint of the stylus."[12]) Certainly an inscription found embedded in the wall of a house at Sirkap in Taxila (inscribed in honour of a high official named Romédōte) is proof that Aramaic was known in India.[13] And again a recently discovered bilingual edict in Greek and in Aramaic of King Aśoka at old Kandahar,[14] proves that an Indian king used Aramaic in his western domain. Two words in Kharoshṭhī inscriptions *dipi* ("script") and *nipista* ("to write") are actually found in the Achaemenid inscriptions, and since they occur in Pāṇini, it is concluded that they were taken over when the provinces of Sindhu and Gāndhāra belonged to the Persian Empire.[15] By the time of Aśoka the 22 Aramaean consonants had

[10] Ahasuerus is a Jewish effort to give it a Hebrew etymology. (L. B. Paton: *The Book of Esther*, International Critical Commentary, 1908, p. 54.)

[11] T. de Lacouperie: in *The Babylonian and Oriental Record*, I, 1886–7, pp. 58–63. [12] S. Smith: *Babylonian Historical Texts*, p. 96.

[13] A. Cowley: in *Journal of the Royal Asiatic Soc.*, 1915, p. 346.

[14] *East and West*, IX, nos. 1–2, 1958, p. 6. Also see D. Schlumberger and others in *Journal Asiatique*, CCXLVI, 1958, p. 1f.

[15] E. Hultzsch: "Inscriptions of Asoka," in *Corpus Inscriptionum Indicarum*, I, 1925, p. XLII.

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already been elaborated into an alphabet of at least 35 letters of which the 5 vowels, the cerebral letters and several aspirated letters were additional to the original Aramaean alphabet.[16] Kharoshṭhī was modified in its vocalization by the Brāhmī script, the vowels being indicated by diacritical marks, but the descent of Kharoshṭhī from Aramaic can still be discerned in the likeness of many signs having similar phonetic value.[17] There is in fact little to substantiate the old view that the Indian alphabet was already mature by about 500 B.C. and came in through the archaic Phoenician alphabet through maritime contact.[18] The earliest extant example of the Kharoshṭhī script of North West India is as late as c. 257 B.C., but we may assume that it had evolved some years previously, perhaps from about the time of the burning of Persepolis in 330 B.C.[19] The statement of Megasthenes (302–288 B.C.) cited by Strabo (XV. I. 53–6) that the people of India are ignorant of writing is contradicted by the earlier report of Nearchus (326–5 B.C.) cited by the same author (XV. I. 66) that Indians wrote on pieces of compressed cotton. The idea of inscribing ethical dissertations on rocks in the guise of royal proclamations is, as it has been suggested, very likely borrowed from Persia.[20] Certain resemblances have been noted between the Achaemenid inscriptions and those of Aśoka : the idioms are dialectically allied, and they both have the same courtly style, especially in the formulation of the introductory sentences, arrangement of titles, etc.[21]

Even the idea of conquest may have been stimulated by example. The expansionist policy of the Mauryan king of Magadha, Bimbisāra (c. 544–493 B.C.), could have been inspired by Persian example, for Bimbisāra was in contact with (the king of) Gāndhāra, which, as we know from Darius (c. 519 B.C.), had become part of the Persian

[16] J. Taylor : *The Alphabet*, 1883, II, p. 259.

[17] D. Diringer : *The Alphabet*, 2nd ed., 1949, pp. 302–4.

[18] G. Buhler : "Indian Studies" in *Sitzungsberichte der Kais-Akademie der Wissenschaften*, Wien, 1895, CXXXII, pp. 5–26. cf. Halevy in *Journal Asiatique*, 8th ser., 1885, and S. Levi in *Indian Antiquary*, 1904, p. 79f ; 1906, pp. 1–18.

[19] S. Konow : *Corpus Inscriptionum Indicarium*, II. Pt. 1, Kharoshthi Inscriptions, 1929.

[20] V. Smith : in *Indian Antiquary*, 1905, p. 202.

[21] Senart : in *Journal Asiatique*, 8th ser., 1885, V, pp. 269f ; and Grunwedel and Burgess : *Buddhist Art in India*, p. 16.

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Empire.[22] At any rate the words *kṣatrapa*, "satrap," and *saha*, "sahi" or "prince" have been borrowed from Iran.[23] Perhaps also the concept of Cakravartin, "universal monarch," may have motivated the Mauryan conquest, but here again the concept is anticipated in the Babylonian title "Lord of the Four Quarters," a title which Cyrus had adopted in his inscription on a clay barrel.[24] This manner of address was typically Assyrian: "King of the Universe" is a title of Tukultienurta I (c. 1250 B.C.), Tiglath-pileser I (c. 1100 B.C.), Shalmaneser III (858–24),[25] while the same title with the additional "King of the four quarters of the world" applies to Assurnasirpal (883–59 B.C.), Tiglath Pileser III (747–27), and Sargon (724–05).[26] In his bilingual Greek and Aramaic rock inscription found at old Kandahar in Afghanistan Aśoka describes himself in this manner as "ruler of all things over the whole earth."[27] And in later times an actual Persian title was copied by an Indian king. When Maues established himself as an independent monarch at Mathurā in c. 80 or 70 B.C., he assumed the title of the Parthian Mithradates, that is to say "Great King of Kings."[28] Tushaspha, Aśoka's governor ruling in the western part of his dominion, is regarded as having a Persian name. This Tushaspha is called in the inscription of Rudradāman (c. 150 A.D.), "the Yavana king," and we are told he added conduits to a reservoir situated near Girnar or Junagarh in Kathiawar for Aśoka.[29] (Yavana incidentally was not the exclusive name of Greeks or Ionians but had a wider meaning, being even used for Semitic nations.[30])

The knowledge that a Persian governor was engaged in the erection of Public Works in India, should be borne in mind, when

[22] A. L. Basham: *The Wonder that was India*, 1954, p. 47.

[23] L. de Vallée Poussin: *Indo-européens et Indo-iraniens l'Inde*, 1924, p. 91.

[24] R. W. Rogers: *Cuneiform parallels to the Old Testament*, 1926, p. 282.

[25] D. D. Luckenbill: *Ancient Records of Babylonia and Assyria*, 1926, I, pp. 50f, 73, 201, 212, 227.

[26] *Ibid.*, I, pp. 139f, 280; II, 1927, p. 48f. Naramsin of Accad was the first to adopt the title King of the four quarters of the world. (W. W. Hallo: *Early Mesopotamian Royal Titles*, 1957, p. 125.)

[27] *East and West, IX*, 1–2, 1958, p. 4f.

[28] H. G. Rawlinson: *Bactria*, 1912, p. 105.

[29] Radhakumud Mookerji: *Aśoka*, 1928, p. 94, and *Epigraphia Indica*, VIII, p. 36f.

[30] M. Muller: *Ancient Sanskrit Literature*, p. 501.

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we consider the possibility that the Royal Road of the Mauryas from their Western frontier to their capital as described by Megasthenes,[31] was influenced by the famous prototype of the Achaemenids,[32] the post route between Sardis and their capital at Susa 90 days distance apart (Herodotus. V. 52). According to Ctesias there was a similar Persian road to Bactria and India.[33] Moreover the Persian Empire had a highly organised system of posts (Herod. V. 14, VIII. 98; Xen : *Cyrop.* VIII. 6, 17).

It has been demonstrated that the ancient metrical system of India is imbued with elements borrowed from Persia based on the Achaemenid monetary measure of a talent. As a result agrarian measurements, mercantile weights, measurement of roads and linear measurements are all identical to those introduced into Egypt under Persian domination.[34] In fact the word *karṣa* meaning a certain weight (whence the coin *kārṣāpaṇa*,) is found in the Iranian lexicon as *karśa* and has the same meaning.[35] The money of the Aramaic colony in Egypt in the 6th century B.C. was also reckoned in *Karsaṣ*.[36] At any rate the Persian *sigloi* circulated freely in the Indian satrapy.[37] Many silver *sigloi* bear countermarks similar to the native punch-marks and some have characters which have been read as Brāhmī and Kharoṣṭhī letters, which clearly establishes that the *sigloi* and the Indian punch marked coins were in circulation together.[38] Moreover it is suggested that the Indian ones were originally based on Achaemenid coinage.[39] After the transference of Greek power from Bactria to the Kabul Valley and Punjab, a

[31] 10,000 stadia = about 1,300 miles. Strabo, XV, I, 11. cf. Pliny, *Nat. Hist.* VI, 21.

[32] H. G. Rawlinson : *Intercourse between India and the Western World*, 1916, pp. 42–3.

[33] G. B. Gray and M. Cary : in *Cambridge Ancient History*, IV, 1926, p. 193. cf. W. M. Calder : in *Classical Review*, 1925, pp. 7–11.

[34] J. A. Decourdemanche : "Note sur l'ancien systéme métrique de l'Inde," in *Journal Asiatique*, 1911, II, p. 367.

[35] L. H. Gray : in *Journal of the American Oriental Society*, XX, pp. 54–5.

[36] F. W. Thomas : in *Journal of the Royal Asiatic Society*, 1916, pp. 365–6.

[37] G. Macdonald : "Ancient Persian coins in India," in E. J. Rapson's *Indian Coins*, 1898, pp. 342–86.

[38] E. J. Rapson : *Indian Coins* (Grundriss der Indo-Arischen Philologie und Altertumskunde, II, 3. B.) 1897, p. 3.

[39] J. Allan : *British Museum Coin Catalogue, Ancient India*, 1936, p. LXXI.

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process which was gradually accomplished between 200–120 B.C. the Persian standard displaced the Attic in India.[40]

For more concrete evidences of exchanges between Mauryan India and Achaemenid Persia we have to go to Pāṭaliputra near Patna, the capital of India at the time. We find points of resemblance between the palaces of the two lands, and it is a curious fact that Aelian (XIII. 18. 1) is led to make a direct comparison when he says that the Indian royal palace is calculated to arouse more admiration and wonder than either Ecbatana or Memnonian Susa. We know that foreigners were settled at Pāṭaliputra, since Strabo (XV. I. 51), citing Megasthenes, refers to the facilities for entertaining them. When in his festival procession Candragupta, who was established at Pāṭaliputra in c. 322 B.C., had attendants carrying basins and goblets of gold (besides tables and chairs of state, vessels and lavers of Indian copper, etc. cf. Strabo. XV. 1. 69) we may imagine that some of these were Achaemenid objects, for classical writers such as Curtius have recorded Alexander's gift of Persian gold and silver ware to Omphis (Sanskrit Ambhi), ruler of Taxila in 326 B.C.[41] From the upper strata of the Bhir mound in Taxila dating from this period there was found a scaraboid of chalcedony with a winged stag drilled in the Achaemenid manner, and also gold bangles with ends terminating in lion's heads like Achaemenid gold armlets.[42] What with the foreigners at Pāṭaliputra and these Persian contacts, it is not unlikely that the hair-washing ceremony of the Indian king as prelude to a festival reported by Strabo (XV. 1. 69), goes back to a Persian custom which has been preserved for us by Herodotus (IX. 110).[43] It is not strange that at a time when India first attained the state of imperial monarchy she should emulate the example of her more illustrious and experienced neighbour.

The most undeniable Achaemenid influences on Mauryan India lie in the domain of architecture. The counterpart to the Hall of a Hundred Columns of Darius Hystaspes at Persepolis is the square hall excavated at Pāṭaliputra where two multiple rows of pillars

[40] P. Gardiner: *Coins of the Greek and Scythic Kings*, p. LXVIII.

[41] Quintus Curtius Rufus: *History of Alexander the Great*, Bk. 8, ch. XII.

[42] *Archaeological Survey of India. Report*, 1919–20, Pt. 1, p. 23; and 1920–21, p. 20, Pl. XVII, Fig. 27.

[43] V. Smith: in *Indian Antiquary*, 1905, p. 202.

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formed square bays.[44] The excavator claimed that these were spaced 10 Indian cubits (of 18″) apart while the Persian columns were 10 Persian cubits (of $25\frac{1}{3}$″) apart, without elaborating this statement.[45] The polish of the pillars seems clearly to have been an imported technique since Persian masonry had this characteristic of high polish.[46] The capitals of this hall may have been of Achaemenid type, for a capital excavated in Pāṭaliputra earlier in 1896, had the Persian double volutes and rosettes on the projecting abacus.[47] Another Persian feature, the bell-shaped inverted lotus lower member of the capital is encountered on the Aśokan capital at Sārnāth (c. 245 B.C.).[48] Analysis reveals that "the Mauryan bell has the same type of petals as the Persian base; the resemblance extending to the short leaves occupying between the festoons at their lower end."[49] As this feature is so clear a case of borrowing, we may yet find that the lotus motif which is so ubiquitous in Buddhist art is ultimately derived from a foreign source.

We may interpose a note here that the Persian plant ornaments of the high base and double wreath of sepals at the capital are themselves now known to be of western, ultimately of Egyptian, origin,[50] while the double spiral volutes in the Achaemenid columns have been traced back from the double and triple volutes on the glazed brick facade of Nebuchadnezzar's palace at Babylon, to those in the capitals of pilasters in Cyprus and in Megiddo.[51]

Whether or not represented at Pāṭaliputra, it is clear that the Achaemenid type of addorsed animal imposts with protomes were assimilated and appeared in later Indian monuments. For instance,

[44] *Archaeological Survey of India*: *Annual Report*, Eastern Circle, 1912–13 and 1913–14.

[45] D. B. Spooner: in *Journal of the Royal Asiatic Society*, January 1915. Note that while at Persepolis there were 10 rows of 10 columns, at Pāṭaliputra only 8 rows were excavated.

[46] cf. E. Herzfeld: *Iran in the Ancient East*, 1941, p. 321.

[47] L. A. Waddell: *Report on the Excavations at Pāṭaliputra* (*Patna*), 1903, Pl. II.

[48] R. E. M. Wheeler: "Iran and India in pre-Islamic times," in *Ancient India*, no. 4, 1947–8, p. 98.

[49] A. K. Mitra "Origin of the bulb capital," in *Indian Historical Quarterly*, VII. no. 2, 1931, pp. 229f, esp. p. 233.

[50] H. Frankfort: in *Journal of Near Eastern Studies*, XIV, 1955, p. 64.

[51] W. Andrae: *Die Ionische Säule*, 1933, Pl. VII, and Frankfort: *Art and Architecture of the Ancient Orient*, 1954, pp. 222–4.

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on the East gate at Sāñchī in a relief representing what is evidently the ceiling of the palace,[52] paired lions, goats, horses (all winged) and elephants are addorsed back to back supporting the architrave in precisely the manner of the bulls of Persepolis.[53] It appears now that at Persepolis there were even griffin capitals of this sort.[54] Again Pāṭaliputra is suggested as the place where the idea was first introduced from Persia since a pair of stone figures of winged lions were excavated at Patna whose purpose may have originally been to support the throne in the Mauryan palace.[55] In our opinion the throne with the lion leg which we find at Amarāvatī in the 1st century A.D.,[56] might also have been introduced in the Mauryan period from Persia, although the theme was endemic in the Middle East much earlier. This is likely since monarchy is for the first time attested historically at this time in India, and the lion had been adopted as one of its leading symbols. In so far as the actual carving is concerned, the Aśokan lions by no means emulate the artistic conventionalization of those of the Achaemenids.[57]

One writer has gone so far as to believe that the Mauryans employed Persian architects, and he has attempted to connect the demon *Asura* or Dānava *Maya*, to whom the Mahābhārata attributes the power to erect huge buildings,[58] with Ahura Mazda, the patron god of Persepolis,[59] but in view of the extravagant views of this writer which have since been fully exposed,[60] we must reject this

[52] Grunwedel and Burgess : *Buddhist Art in India*, 1901, p. 17.

[53] For differences between Persepolitan and Mauryan columns see L. Bachhofer : *Early Indian Sculpture*, pp. 8–9.

[54] See *Illustrated London News*, January 2, 1954, p. 18, Figs. 5–8.

[55] S. Piggott : in *Ancient India*, no. 4, 1947–8, pp. 101–3.

[56] C. L. Fabri : in *Étude d'Orientalisme a R. Linossir*, 1932, pp. 227–9. For Indian thrones with theriomorphic feet see J. Auboyer : *Le Trône et son symbolisme dans l'Inde Ancienne*, 1949, pp. 34–5.

[57] cf. e.g. Fig. 37, p. 19 in *Encyclopedia dell 'Arte Antica*, I, 1958. If anything Hellenistic influence is manifest in the Mauryan lions in the treatment of cheekbones, moustaches, deeply-embedded eyes and freely rendered manes, as others have already observed. Hellenistic rather than Achaemenid origin for the Mauryan lions has been suggested for stylistic reasons. (N. R. Ray : *Maurya and Suṅga Art*, 1945, p. 42f.)

[58] Hopkins : *Great Epic of India*, p. 391.

[59] D. B. Spooner : in *Journal of the Royal Asiatic Society*, 1915, pp. 77–89.

[60] P. K. Acharya : "Indo-Persian Architecture," in *Calcutta Review*, April 1930, pp. 32–4 ; see also February 1930, pp. 163–79 and March, pp. 373–80.

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identification. Actually Asura Maya is more likely to be Ptolemaios of the Greeks since Piyadasi or Aśoka's inscription of c. 250 B.C. refers to Ptolemy as Turamaya (from which Asura Maya may have grown), and this Maya in later tradition is distinctly assigned to Romakapura in the West.[61] Another Ptolemy, son of Lagos, it will be remembered, was one of the most important of Alexander's generals in India, and after the passing of Alexander became king of Egypt, where he founded the Ptolemaic dynasty. The most deserving of the title "wonder architect" however, was his son Ptolemy II Philadelphus (308–246 B.C.) who not only built the Museum and Library of Alexandria and a canal from the Nile to the Red Sea, but also the Pharos lighthouse which was undoubtedly the most famous tower ever built by the hand of man. In fact this very Ptolemy II exchanged embassies with Candragupta II, as we shall see later. Perhaps there is some substance to the remark of Diodorus (II. 60) following Iambulus that the king of Palibothra was a lover of Greeks.

We may incidentally point to a curious parallel in the words with which two later writers describe the palaces in the capitals of the two countries, Iran and India. Of Pāṭaliputra the Chinese pilgrim Fa Hsien says in c. 400 A.D. that Aśoka "commissioned the genii to construct (the palace) by piling up the stones. The walls, doorways and the sculpture are no human work."[62] In the same vein Ibn Haukal writes that the great building of Istakhr (Persepolis) with its "statues carved in stone, its inscriptions and paintings . . . was built by Dives or Demons."[63] Perhaps both ideas go back to a common source. The later Greeks believed that the enormous ancient walls in Greece at Argos, Tiryns and Mycenae, which were of unhewn masonry in polygons sometimes 20–30 feet in breadth, were built by mythical giants, the Cyclops.[64]

[61] A. Weber, *Indische Studien*, II, p. 243.

[62] J. Legge : *A Record of Buddhistic kingdoms*, p. 77 ; and Beal, L. V.

[63] Ouseley : *The oriental geography of Ibn Haukal*, 1800, pp. 128–9.

[64] Apollodorus : ii. 1. para. 2 ; Strabo. VIII. p. 373, and Pausanias ii. 16 para. 4.

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Chapter V

THE IMPACT OF GREEK CULTURE UPON INDIA

One seemingly unusual feature of the Mauryan capital of Pāṭaliputra was the wooden wall, pierced with loopholes, surrounding the city as described by Megasthenes (Strabo. XV. 36). Excavation has revealed the veracity of this statement. Not only was there found a palisade of teak beams held together with iron dowels, but timber was used freely for platforms as well. Since the palisade consists of a double line of upright timbers[1] apparently filled with earth, we are strongly reminded of the mound thrown up by Archidamus against Plataea in 429 B.C. As Thucydides (Bk. II. 76) describes it, it was of timber laid on either side like lattice work to form a wall and keep the earth from spreading. A relief on Trajan's Column in Rome (erected 113 A.D.) shows such a rampart in the course of construction with successive layers of logs strengthening the earth mound.[2] The idea, if at all introduced from Greece,[3] was not well received in India, since the *Arthaśāstra* is averse to the use of wood for this purpose owing to its liability to fire and rot.[4] Megasthenes says it was the custom in India to use wood where floods were common, and brick and mud where buildings were on elevated spots, but this statement seems to refer to houses and not to the walls. Curtius says (*Hist. of Alexander*, Bk. VIII, ch. 10, 23f) that wooden beams in (*Gāndhāran*) fortifications were to prevent the superstructure from sinking.[5] Vedic literature has no

[1] *Archaeological Survey of India. Annual Report*, 1926–7, p. 135f.

[2] T. Schreiber : *Atlas of Classical Antiquities*, 1895, Pl. XLI, Figs. 2, 8.

[3] It was not however a Greek invention. Thothmes III in besieging Megiddo, encircled the city with an enclosure walled about with green timber (J. H. Breasted : *Ancient Records of Egypt*, 1906–07, II, 13.)

[4] A. L. Basham : *The Wonder that was India*, 1954, p. 134. See English translation of *Arthaśāstra* by R. Shamasastry, 3rd ed., 1929.

[5] Vitruvius (*de Architectura*. I. iv. 11) advises that on marshy ground the site should be consolidated with poles of alder, olive or scorched oak, and the stakes should be driven in by machines. Such stakes, he adds, were used as foundations below the buildings of Ravenna.

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mention of wooden walls though this has been suggested without proof.[6] What is there is a reference to a stone fort (Ṛg Veda IV. 30.20) and iron forts (I. 58. 8) intended metaphorically.

If the wooden wall of Pāṭaliputra was based on a Greek idea then a possible source for it is not far to seek. Early in 326 B.C. Alexander led his army into the plains of India, and within a space of 20 months overcoming stout resistance, he became master of the Punjab as far as the Sutlej and from there down right up to the mouth of the Indus. When he drove the Kathaians into Sangala and surrounded it, he encompassed the walled city with a double stockade (Arrian's *Anabasis*, Bk. 5, ch. XXIII).[7] That is to say, it was a defensive barricade of timber, and if the piles and stakes had only been fixed in the ground,[8] then we would have the immediate prototype of the palisade of Pāṭaliputra. We know that Alexander had actually built a palisade round his camp two stadia from Persepolis (Curtius V. 5. 9). The Mahābhārata (Vana Parva, ch. 15) refers to "streets barricaded with spiked woodwork."[9] If the stockade of Alexander was hastily built for a campaign, we know at least that Hephaistiôn had been ordered by him to build and fortify the city of Akesines[10] where he settled some of his disabled mercenary soldiers.[11] Hephaistiôn was also ordered to prepare for the fortification of the harbour of Patala and for the construction of a dockyard.[12] Moreover, another city founded by him in India, Alexandria-Bucephala on the east bank of the Jhelum, regained its importance later as the capital of the Indo-Greek king Hippostratus and is mentioned as late as the Periplus.[13] There is a possible reference to this in Indian literature, for an event in 133 B.C. in the History of Ceylon refers to "Alasada of the Yonas" as a

[6] Pischel and Geldner : *Vedische Studien*, I, pp. XXII, XXIII.

[7] cf. J. W. McCrindle : *The Invasion of India by Alexander the Great*, 1896, p. 117–118.

[8] Arrian says later that the stakes which had been cut but not fixed in the ground were used to form stockades, but whether these were fresh stakes or re-used from those mentioned in the previous passage is not clear.

[9] cf. B. K. Majumdar : *The Military System in Ancient India*, 1955, p. 49.

[10] The site of this city is said to be where Wazirabad now stands. Lassen : *Indische Alterthumskunde*, II, p. 165.

[11] Arrian : *Anabasis*, Bk. 5, ch. XXIX.

[12] *Ibid.*, Bk. 6, ch. XX.

[13] W. W. Tarn : *Alexander the Great*, 1948, II, pp. 236–7.

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great town[14] whence monks have come for a festivity. The idea of the palisade may have been introduced through the Indians enlisted in the Greek armies of the Successors, such as the Indian general Ceteus who died in 316 B.C. in the camp of Eumenes (once secretary of Alexander), on which occasion we may recall the two wives of the deceased contested for the privilege of being burned on the funeral pyre (Diod : xix. 33f). Another military feature which might have been borrowed at this time was the art of mining. (Alexander for example had undermined the Mallian walls in his campaign down the Hydaspes : Arrian VI. 7.) This is suggested by the word *surańga* in the *Arthaśāstra* (IV. 402), stated to be borrowed from the Greek word *syrinx*, "which had the same secondary meaning."[15] In the Indian cities of Alexander many foreigners must have continued to reside, for it was part of Alexander's policy to leave mercenaries in every satrapy and newly-founded city. The foreign settlers may be imagined as being of very diverse origins, for we know that the fleet built by Alexander on the Indus in 326 B.C. and placed under the command of Nearchus was manned by Phoenicians, Cypriots, Egyptians and Greeks.[16] The fleet consisted of 80 galleys each of 30 oars, not to mention the horse transports, luggage boats and smaller native craft. Strabo (XV. I. 29) says that it was built on the Hydaspes (Jhelum) where he had crossed the river and conquered Poros and where he had built cities on both banks. Persians too must have settled in these cities since we know that the hipparchy formed by Alexander in advancing from Taxila to the Jhelum consisted largely of Iranian horse.[17]

It is not inconceivable that Greek town-planning ideas may have been introduced into India at this time. It has been noted by the excavator of Taxila that the Mauryan city is laid out at random, in direct contrast to the methodical planning of the city of the

[14] *Mahāvaṁsa*, tr. Turnour, p. 110. *Alisamdaga* (name of a bean) and *ālakandaka* (name of a coral) are further names suspected to be related to Alexandria (P. Pelliot : *Notes on Marco Polo*, I, 1959, p. 29.)

[15] A. L. Basham : *op. cit.*, p. 135. cf. J. Jolly : *Arthaśāstra of Kautilya*, 1923, and Winternitz in *Indian Historical Quarterly*, I, p. 429f.

[16] Arrian : *Anabasis*, VI, 2. 4, and *Indika*, 19.17. cf. Jouguet : *Macedonian Imperialism and the Hellenization of the East*, 1928, p. 46. The data given by classical historians on India has been critically examined by L. Pearson : *The lost histories of Alexander the Great*, London, 1960.

[17] W. W. Tarn : *op. cit.*, I, p. 93.

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Bactrian Greeks at Sirkap which he insists is decidedly Hellenistic in effect.[18] The main street runs from north to south, and the side streets which intersect it at right angles at fairly regular intervals ran from east to west. The very fact that there was a Greek settlement at Sirkap is now contested on the basis of stratigraphical analysis, and it is claimed that systematic occupation of the city dates from the construction of the city wall in c. 50 B.C.[19] Even if this is true we must bear in mind that Taxila was practically a frontier city and as such continually in touch with the Graeco-Bactrian kings who had themselves held the city for a time. In view of this it would be difficult to believe that at Taxila the town planning ideas stem from remote Mohenjodaro times. The earliest indication of such a system in India may be Sagala, the city of Menander (c. 165–130 B.C.). This ruler's name is preserved in Indian texts as Milinda. The book, *Questions of Milinda*, whose form of interrogation and answer compellingly recalls the dialogues of Plato, describes the city as well laid out by wise architects with streets, squares, crossroads and market places, and with the white-walled royal citadel in the centre surrounded by a deep moat.[20] In this book of wise precepts Milinda is described as a king of the Yonakas. His city Sagala (Sialkot?)[21] is suggested to be the Euthydemia of the Greeks, and the book says he was born 200 yojanas from there, or about 900 miles, on an island called Alasanda.[22] We learn from Strabo (*Geog.* XI. 11. 1) that Menander was one of the two Bactrian kings who were instrumental in spreading the Greek dominion farthest East into India. Menander's coins are usually found in Mathurā, Kabul and in Kashmir, though the author of the Periplus (ch. 47 ed. Müller) says his coins were current many years after his death at Barygaza (Broach) on the coast of Gujarat. The coins have legends in Greek on one side and the corresponding legend in Prākṛt in Kharoshṭhī letters on the other. There is usually

[18] J. Marshall: *Taxila*, I, 1951, pp. 12, 198, Pl. 24.

[19] R. E. M. Wheeler and A. Ghosh: in *Ancient India*, no. 4, p. 41f.

[20] Rhys Davids: "The Questions of the King Milinda," in *Sacred Books of the East*, XXXV, pp. 2–3.

[21] See J. F. Fleet: "Sāgala, Śākola, the City of Milinda and Mihirakuli," in the *Acts of the Fourteenth Oriental Congress*, Algiers, 1905, I, p. 164f.

[22] Rhys Davids (*op. cit.*, Pt. 1, p. 127) claims that this is an island in the Indus, even though in another passage (Pt. 2, p. 269) Alasanda is listed among seaports "where ships congregate."

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a figure of the goddess Pallas armed with a thunderbolt, or a figure of victory holding a wreath, but one type has what may be a Buddhist epithet *dharmikasa* or follower of the dharma (but note that *dhramika* is a translation of the Greek *dikaios*, an epithet of Menander's predecessor Agathocles), and another has a wheel which may be the *dharma-cakra* or wheel of the law.[23] This is not in our view sufficient evidence that Menander was converted to Buddhism, for he was evidently a very tolerant ruler, and we are told in the *Questions of Milinda* that in Sagala the streets "resounded with cries of welcome to the teachers of every creed, and the city is the resort of the leading men of each of the different sects." If not actually converted to Buddhism Menander must have given it a favourable hearing, for Plutarch tells us (*De Repub. Ger.*, p. 821) that he was a ruler noted for justice and enjoyed such popularity with his subjects that on his death while in camp many cities contended for the possession of his ashes. Eventually the relics were divided amongst themselves, and memorials (no doubt stūpas) were erected in his memory. This was high honour indeed for the event as described by Plutarch exactly recalls that recorded of the Buddha himself in Buddhist literature, where seven tribes quarrel over the ashes, agree to divide them, and finally enshrine them in stūpas in their respective countries.[24]

Even if Menander had moved only half way to Buddhism we can imagine that he was an important instrument in bringing his Hellenistic inheritance into India. At any rate we soon find such axially conceived regular town plans in texts which cannot be far from this date. Kauṭilya[25] in his *Arthaśāstra* (Ll. 29) says that the fortified city should be laid out with three royal roads running from

[23] P. Gardner: *Catalogue of Indian Coins in the British Museum*: *Greek and Scythic kings of Bactria and India*, 1886, p. 50, nos. 73, 74, and Pl. XII, 7.

[24] Buddhist Suttas, tr. Rhys Davids, *S.B.E.*, *XI*, pp. 133–5.

[25] A. B. Keith regarded the *Arthaśāstra* as dating from the first century B.C. and incorporating still older material (*JRAS.* 1916. p. 130) but later he felt that it might have been written in the 3rd century A.D. (*History of Sanskrit Literature*, p. 461). Although the *Arthaśāstra* cannot in its present state be attributed to Kauṭilya who was the brahman minister of Candragupta Maurya, we may observe that Kauṭilya was associated with Takṣaśilā or Taxila.

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west to east and three from north to south.[26] Such a town must actually have been built, for according to the Mayamata, in a town by the name of Vedibhadraka three streets ran north and three east.[27] Kauṭilya goes on to say that in the centre were to be temples to the gods and to the north of this the king's palace. Similarly the Matsya Purāṇa (217. 19–23) refers to two cross streets meeting at the centre of the fort though each of the principal features, a palace, a temple, a court and a gate were to be situated at the ends of each of the streets.[28] Here we need only juxtapose descriptions of some Greek cities known through literature and excavations to enable us to picture what the cities of Alexander and the Bactrian Greeks looked like, and then leave it for the reader to decide whether town planning in the later Indian texts owes anything to Greek ideas. Excavations at Miletus have shown that the city (destroyed by the Persians in 494 B.C.) was geometrically replanned after the Greek victory at Mycale in 479 B.C.[29] A native of Miletus, Hippodamus, took these ideas with him when he remodelled Piraeus, the harbour town of Athens, and the pan-hellenic colony of Pericles at Thurii in South Italy in 443 B.C.[30] According to Diodorus Siculus (XII. 10), Thurii was laid out with four main streets in one direction and three in the other. The city of Priene, refounded in Alexander's time, is of this type with streets running exactly north to south and east to west. There is one main east-west artery, and the blocks between the streets are equal.[31] Strabo (XII. 4, 7) describes Nicaea (which was probably planned in the early Hellenistic age) as a square town with streets at right angles and four gates visible from

[26] Sisupalgarh in Orissa (dating from 1st or 2nd century A.D.) from an aerial view seems to have a pair of gates on each of the four sides of the square enclosure wall. (See A. L. Basham : *The Wonder that was India*, 1954, Pl. XIa.)

[27] K. Rangachari : "Town planning and house building in Ancient India," in *Indian Historical Quarterly*, 1927, III, p. 833.

[28] B. B. Dutt : *Town planning in Ancient India*, 1925, p. 161. For a discussion of the date of this treatise see V. R. R. Dikshitar : *The Matsya Purāna*, 1935, p. 35f.

[29] A. von Gerkan : *Griechische Städteanlagen*, 1924, and D. S. Robertson : *A Handbook of Greek and Roman Architecture*, 1945, p. 187.

[30] See now F. Castagnoli : *Ippodamo di Mileto e l'urbanistica a pianta octagonle*, Rome, 1956.

[31] D. S. Robertson : *op. cit.*, P. 189, Figs. 83, 84, and M. Schede : *Die Ruinen von Priene*, Abb. 10, 11, 13.

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the gymnasium in the centre. Then there is of course Alexandria itself, whose plans were drawn up by Dinocrates of Rhodes. Its Canopic Street ran east and west, and another also more than 30 yards wide intersected it at right angles in the centre of the town, while there were other secondary streets parallel to them.[32] Finally we may instance Dura Europos, a caravan city in the Syrian desert, which was founded at the end of the 4th century B.C. probably by Alexander's general Seleucus. Here too excavation has revealed a network of intersecting streets forming rectangular blocks. The main street in the middle is twice the width of the rest.[33] It would not be surprising if in planning the many Alexandrian cities these principles were invariably observed, for the disciplined military commanders would tend to impose as rational a scheme of blocks and streets as they would in the marshalling of their forces. If this were true, then we would expect to find such principles upheld in the planning of military camps, and indeed we do find this to be the case in the *castra* or Roman camp. According to Polybius (Vi. 27), the plan of a camp for a consular army of two legions in the middle of the 2nd century B.C. was a square with two main roads through it. The *Via Principalis* (100 feet wide) ended in two gates, and the *Via Praetoria* (50 feet wide) intersecting it at right angles and dividing the whole camp into equal parts, also ended in two gates. In the middle was the Praetorium with the general's tent, altar and tribunal, and the Forum or meeting place for soldiers. In the time of Hyginus (2nd century A.D.) the camp was somewhat different, being a rectangle of fixed proportions (length a third greater than breadth), and the interior was divided into three main sections. Recently an attempt has been made to break down the analysis of Roman grid cities into different categories including those of Hippodamian origin, those with crossed axes, those with an axial plan showing the influence of the camp, etc.[34]

[32] E. Bevan : *A history of Egypt under the Ptolemaic dynasty*, 1927, p. 91 ; Cf. Breccia : *Alexandria ad Aegyptum*, 1914, p. 68.

[33] M. Rostovtzeff : *Dura Europos and its Art*, 1938. Many more instances could be cited of such cities in the West. See F. Haverfield : *Ancient Town-Planning*, Oxford, 1913 ; and R. E. Wycherley : "Hellenistic Cities," in *The Town Planning Review* (Liverpool), XXII, no. 3, October 1951. pp. 177–205.

[34] B. Zevi : in *Encylopaedia of World Art*, I, 1959, p. 674 ; and F. Castagnoli : "Aspetti dell' urbanistica greca," in *Studium*, LIII, 9, 1957.

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We had suggested in the previous chapter that the Rock Edicts of Aśoka (272–32 B.C.) were probably inspired by Persian example, and now we may examine the possibility that Aśoka's practice of erecting inscribed pillars may have been influenced by a Greek idea. In Greek myth Hercules erected pillars in the farthest west to mark his victory over the monster Geryon. What Hercules is reputed to have done in the extreme west, Alexander did in the extreme east, and we find a good example of terrestrial domination to the extreme limits in the wish of Antiochus Soter (280–62 B.C.) who says in an inscription, "may I personally conquer (all) the countries from sunrise to sunset."[35] The Book of Maccabees says that Alexander "went through to the ends of the earth" (I Macc I. 3). Strabo (III 5, 170–1) discusses the Greek habit of setting up pillars or altars to mark the farthest point reached and says that on the Beas Alexander erected altars. Pliny (Vl. 49) says that altars were erected on the Jaxartes by those conquerors who reached the river, including Heracles, Dionysus, Semiramis, Cyrus, Alexander, and Damodamus, the general of Antiochus I. Pliny (Vl. 21) also says that on reaching the limit of his march, Alexander crossed the Hyphases (Sanskrit Irāvatī) and dedicated altars on the further bank.[36] Arrian (V. 29) says that Alexander divided the army into brigades and ordered them to prepare twelve altars to serve as thank-offerings to the gods who had led him so far as a conqueror, and also as a memorial of his own labours. When the altars had been constructed, he offered sacrifice upon them with the customary rites, and celebrated a gymnastic and equestrian contest. We do not know on what authority Plutarch contends that Alexander's altars were held in much veneration by the Prasians, whose kings, he reports, were in the habit of offering sacrifices in the Grecian manner upon them.[37] But Apollonius of Tyana (c. 42 A.D.) is stated by Philostratus to have come during his Indian travels to Alexander's altars which were 30 stades east of the river. He saw the inscription dedicated to Father Ammon and his brother Hercules, to Athena Pronaia,

[35] *Ancient Near Eastern Texts*, ed. J. B. Pritchard, 1955, p. 317.

[36] There may be a parallel to this in the Han boundary pillar to mark the southern limits of conquest erected by General Ma-Yuan in 42 A.D. (see *Han-Hiue*, vol. 3, Pts. 1–2, Pekin, 1948, pp. 43–58).

[37] J. W. McCrindle: *The Invasion of India by Alexander the Great*, 1896, p. 349.

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to the Olympian Zeus, the Samothracian Cabeiroi, the Indian sun god and the Delphian Apollo. Beyond the altars was a bronze pillar with the inscription "Here Alexander halted."[38] The bronze inscribed pillar certainly recalls the later iron pillar of Samudragupta now at Delhi,[39] and Philostratus does suggest that the bronze pillar was raised by the Indians, though he gives as a reason the joy of the Indians at the return homeward of Alexander.

If the altars were simply tablets on pedestals we could not compare them to the high pillars of Aśoka, but Arrian (V. 29) furnishes us with the further vital information that they were "equal in height to the highest military towers." Whether all these details furnished by classical writers are accurate or not, we must at least accept the fact that Alexander built lofty memorials of victory which were inscribed, and these, we suggest, were the inspiration for the inscribed pillars of Aśoka. In the Indian tradition there is no antecedent for the *Jaya-stambha* or victory pillar, although the sacrificial pillar *yūpas* is known in early texts.[40] It is true that Aśoka's columns are not pillars of victory in the martial sense, since after his victory in the Kalinga war in 261 B.C. he became thoroughly averse to war and bloodshed, but they remain nevertheless as memorials commemorating victory of a different sort, that of morality.

The view that the Mauryan *śilā stambhas* originate from animal standards intended for worship, with the crowning animals being emblems of different gods,[41] can have little to commend it, for the only instance where we may legitimately suspect that the animal chosen is an emblem of a god, is a comparatively late one. It is significant that this earliest existing pillar in India which is dedicated to a deity was set up by a later Greek. This was the monolithic garuḍa column at Besnagar near Bhilsa in Central India; and we know from the inscription that it was erected in honour of Vāsudeva (a form of Viṣṇu, the garuḍa being his vehicle) by Heliodorus son

[38] O. de B. Priaulx: *The Indian Travels of Apollonius of Tyana*, 1873, pp. 25–6; and J. Charpentier: *The Indian Travels of Apollonius of Tyana*, 1934, p. 58.

[39] Vogel: in *Journal of the Punjab Historical Society*, IX, 1928, p. 71f.

[40] N. P. Chakravarti: in *Ancient India*, 4, 1947–8, p. 24.

[41] R. P. Chanda: "The Beginnings of Art in Eastern India" (*Memoirs of the A.S.I.*, no. 30), pp. 31–3.

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of Dion of Taxila.[42] He was sent as envoy to the Sunga ruler of Besnagar by King Antialkidas (c. 100 B.C.). Since the inscription on the reverse advocates restraint, rectitude and renunciation as leading to Heaven, the pillar is both ethical in the sense of Aśoka, and dedicated to a god like that of Alexander. In the necking below the capital of the "lat" at Allahabad occurs the Greek honeysuckle ornament, which itself can be traced from the later Assyrian "knop and flower"[43] through to the Achaemenian metalwork of the 5th century B.C.[44]

Alexander's pillars in turn seem to have their roots in two separate traditions. As memorials of victory they are anticipated by the Assyrian obelisks of Assurnasirpal and Shalmaneser III. The famous black obelisk (854–39 B.C.) of the latter describes that king's conquests, achievements, and the tributes he has received.[45] As dedications to deities (above all note Ammon) Alexander's columns are anticipated by the obelisks of the Pharaohs. For example that of Rameses II (1292–1225 B.C.) at the Temple of Luxor extols the monarch as "the constructor of memorials . . . placing them for millions of years at the house of Amen-Ra."[46] Ammianus Marcellinus (XVII. 4 para. 6) was under the impression that Egyptian obelisks were erected in honour of the gods by kings who were elated by some victory or by the general prosperity of their affairs. We know incidentally from Pliny (XXXVI. 14) that Ptolemy II (who was in touch with Candragupta) erected an obelisk of 80 cubits at Alexandria. These Egyptian obelisks, pointing sunward with their sharp apexes, were sun emblems, and the inscription on the obelisk of Thothmes IV (1420–11 B.C.) now at the Lateran in Rome confirms this calling the god Ra-men-khepher "like the Sun," and "son of the Sun."[47]

[42] J. Marshall: in *Journal of the Royal Asiatic Society*, 1909, p. 1055, and H. Raychaudhari in *Journal of the Asiatic Soc., Bengal*, XVIII, 1923, pp. 269–71. It is a surprising fact to find a Greek making such a dedication to the Bhāgavata sect of Hinduism, but a number of explanations are possible.

[43] J. Fergusson: *Illustrated handbook of Architecture*, I, p. 7; and G. Birdwood: *The Industrial Arts of India*, 1880, II, pp. 166–7, Figs. 2, 13, 20.

[44] A. D. H. Bivar: in *Journal of the Warburg and Courtauld Institutes*, XVII, 1954, p. 182.

[45] R. W. Rogers: *Cuneiform parallels to the Old Testament*, 1912, pp. 293f.

[46] H. H. Gorringe: *Egyptian Obelisks*, 1882, p. 120; and Budge: *Cleopatra's Needles and other Egyptian obelisks*, 1926, p. 203.

[47] *Ibid.*, p. 127.

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This leads us back to Aśoka's pillars, for the pillar at Sārnāth has sun wheels between each of the animals represented.[48] No one has yet doubted this idea to be anything but a native one, but once again we have detected a possible foreign source. On the abacus of the Sārnāth capital the animals consist of a horse, a humped bull, a lion, and an elephant, and they are following the disks round in a circle. Now we have precisely these animals — horse, winged bull, and lion revolving round a hub in the Nippur tablets from the reigns of Artaxerxes I and Darius II (464–404 B.C.)[49] The resemblance would seem to be fortuitous, but for the fact that here too a solar idea is probable, since in other tablets the revolving beasts are simply horses, or in other words the team that draw the chariot of the sun. These tablets must have travelled widely since they were the documents of bankers, Murashu and sons. We know in fact that among their business tablets are records of their dealing with certain Indian merchants, and there is a reference to a settlement *Hi-in-da-ai*.[50] The emblem of a sun disk carved in relief on Buddhist monuments, for example, at Amarāvatī ultimately originates in Assyria,[51] and similarly the so-called Buddhist triśūla ornament is patterned on the winged solar disk of Assyria.[52] Moreover Mesopotamian sun pillars surmounted by disks (*surinnu*) which stood at entrances to temples,[53] or were borne by priests of the sun god,[54] are prototypes of sun wheels on pillars at the Buddhist stupas.[55] In a later place we will trace further influences of the Persian solar cult in India.

The invasion of India by the Kushans of Central Asia (c. 50 A.D.) inaugurated a new and interesting phase in Indian history. Kaniṣka,

[48] e.g. Coomaraswamy : *History of Indian and Indonesian Art*, 1927, p. 17, Fig. 12.

[49] L. Legrain : *The culture of the Babylonians from their seals*, 1925, nos. 882, 885, Pls. XXXIX, XL.

[50] *The Babylonian Expedition of the University of Pennsylvania*, vol. X. Business documents of Murashu and Sons, ed. A. T. Clay, pp. viii, ix.

[51] C. L. Fabri: *Études d'Orientalisme*, Musée Guimet, 1932, pp. 212–13, Fig. 31.

[52] G. d'Alviella : *The Migration of Symbols*, 1894, Figs. 143, 150. Cf. Fig. 137.

[53] E. D. Van Buren : *Symbols of the gods in Mesopotamian Art*, 1945, pp. 92–5.

[54] O. Montelius : *Die älteren Kulturperioden*, 1907, Fig. 1300.

[55] J. Fergusson : *Tree and Serpent Worship*, 1873, p. 237, Pls. XCVIII, XLII.

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one of its rulers, is represented in the *Rājataraṅgiṇī* as belonging to the Turuṣka (Turkish) race.[56] From his coins it is evident that Kaniṣka attempted some sort of syncretistic religion incorporating all the current deities of his realm. In this he was not only the forerunner of the Mughal Emperor Akbar but was in some respects following an example set by Alexander who encouraged and patronized foreign deities. On gaining recognition from Egyptian priests, Alexander had offered sacrifice to Apis, and had ordered the re-building of the sanctuary in the Temple of Thothmes III at Karnak and that of Amenhotep III at Luxor.[57] In the Temple at Luxor he had himself carved as a Pharaoh standing in the presence of the old gods of Egypt; the dedicatory inscription which still survives says that he had made this sanctuary as a memorial to his father Ammon.[58] In Babylon he commenced rebuilding the Temple of Bel, the E-sagila that Xerxes had destroyed (Arr. III. 16, 4; VII. 17. 1f), and in India he gave sacrifice to the gods whom Ammon had told him to honour, among them the gods of the rivers Jhelum, Chenab and Indus (Arr. VI. 3. 1). Now one of the gods mentioned on Kaniṣka's coins could just be Alexander himself. This is Skanda, for the name resembles Sekander, the medieval Persian corruption of Alexander. Who deserves better the status of Skanda as commander of the army of the gods than Alexander, by common consent one of the greatest military commanders in world history? That the name Alexander was used under the form Alikyasudala in Aśoka's time is no argument against its being corrupted still further in the course of a century and in a region adjacent to the Parthian realm. The fact that Skanda is first[59] mentioned by Patañjali (in the context of the exhibition and sale of images of Skanda, Śiva, Viśākha and other gods)[60] strengthens our contention, for Patañjali's date has

[56] R. G. Bhandarkar: in *Journal of the Bombay Branch of the Royal Asiatic Society*, XX, 1900, p. 384.

[57] Wilcken: *Alexander the Great*, 1932, p. 116.

[58] A. Weigall: *Guide to the Antiquities of Upper Egypt*, p. 76.

[59] The completely isolated reference to Skanda in the Chāndogya Upaniṣad (*SBE*, tr. Müller, I, p. 125) must surely be cause for suspecting a late passage? There is another mention of Skanda in the Bhagavad Gītā, X, 24, but this book could not have been composed long before the Christian era (cf. F. Edgerton: *The Bhagavad Gītā Interpreted*, 1925, p. 3).

[60] II. p. 429 ed. Keilhorn; S. Konow: "Notes on the use of images in ancient India," in *Indian Antiquary*, XXXVIII, 1909.

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been fixed by one author at c. 142 B.C.,[61] and this brings us within the reign of Menander (155–130 B.C.), when the rule of the Bactrian Greeks was at its height in India, and when, as we have seen, teachers of every creed had free let to preach. But before our identification can be accepted we will have to show the basis for conceiving Alexander as a god and for the persistence of the idea of divine kingship among his successors. Plutarch (*Alex.* 62 ; 10) actually says that Candragupta who had seen Alexander when he was himself but a boy, later when he became king worshipped Alexander among his gods.[62] As for Alexander's aspirations to divinity, we know that he requested and received his own deification from the cities of the League of Corinth in 324 B.C.[63] A shrine was built in Megalopolis in Arcadia in honour of Alexander's godhead (Pausanias VIII. 32. 1). It must have been Alexander's example that was emulated later by the Bactrian Greeks. Euthydemus (c. 200 B.C.) was deified after his death, as is evident from a pedigree coin of Agathocles,[64] and subsequently Antimachus (190–180 B.C.) calls himself Theos (the god) on his coins.[65] The practice continues among the Parthians, where a beardless king, possibly Phiapitius, calls himself Theos on a coin of the early 2nd century B.C.[66] Ammianus Marcellinus (XXIII. 6) says that the Parthian king was an object of national adoration after his death. A Greek inscription from Susa of the 1st century B.C. calls the Parthian King Phraates IV a god, with a *daimon* (*fravashi*) of whom the Greeks spoke with respect.[67] Now if the title Maheśvara on the coin of Kadphises II (c. 90–110 A.D.), Kaniṣka's predecessor, signifies that he claimed to be a descendant of Śiva,[68] then it would at once become apparent from what source the Kushan rulers obtained the idea of divine kingship. The very

[61] R. G. Bhandarkar : in *Indian Antiquary*, I, p. 299f, and II, p. 69f.

[62] In the Muslim period the people of Nagrakote told Ferozeshah Tughlak that the idol which they worshipped was the image of Nowshaba, wife of Alexander. Was this a pure fabrication on the part of the historian ? (See Tāriki-Ferishta in Elliot and Dowson : *The History of India as told by its own historians*, VI, p. 227).

[63] W. W. Tarn : *Alexander the Great*, 1948, II, p. 370.

[64] P. Gardner : *Coins of the Greek and Scythic Kings*, p. 10, no. 2.

[65] *Ibid.*, p. 12, no. 1.

[66] L. R. Taylor : in *Journal of Hellenic Studies*, XLVII, 1927, p. 53.

[67] C. W. McEwan : *The oriental origin of Hellenistic Kingship*, 1934, p. 20.

[68] A. K. Coomaraswamy : *History of Indian and Indonesian Art*, pp. 22, 67.

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nimbus around Kaniṣka's head, and the luminous rays surrounding Vima Kadphises II on his gold pieces are characteristics of deification, and must go back ultimately to the coins of Antiochus IV Epiphanes (195–164 B.C.) who has the epithet ΘΕΟΣ and has rays surrounding his head, while such rays consistently appear round the heads of the deities of the Bactrian Greeks, among them Apollo and Artemis.[69]

Now we will retrace our steps and examine the alliances between the Indians and the Greeks after the passing of Alexander and some possible consequences arising from them. We shall itemize them in chronological sequence for the sake of clarity :

(1) On retiring from India Alexander appointed Philip, son of Machates, Satrap of the Indians of the Taxila region, and left behind a garrison (Arrian : *Anab.* V. 7, 3–8. 2). The death of Philip in 324 B.C. left Eudamus and Taxiles in charge while Poros was to administer Sind (cf. Diodorus, XVIII, 39). In 317 B.C., however, Eudamus felt compelled to leave India to aid Eumenes in his struggle against Antigonus (cf. Diodorus, XIX, 4). We may imagine that Candragupta was quick to take advantage of his absence, and we are told by Justin (XV. 4) that he collected a band of robbers, instigated the Indians to overthrow the existing government consisting of Alexander's prefects, and won the throne. By about 305 B.C. Seleucus I Nikator (312–281 B.C.) planned to recover the Indian conquests of Alexander. He was unsuccessful, and in his alliance with Candragupta he had to cede the Satrapies of Arachosia and he himself received 500 elephants (Plutarch : *Lives*, Ch. LXII and Strabo XV. 1. 10 ; 2. 9). With these elephants Seleucus was able to overthrow Antigonus at Ipsus in 301 B.C.[70] Seleucus also sent an Indian tiger to Athens.[71] According to Appian (*Syr.* 55)

[69] M. E. Drouin : in *Revue Numismatique*, 4th ser, t. V, 1901, pp. 154–66.

[70] With the elephants must have gone Indian mahouts. In fact Indian mahouts were in charge of the elephants in Carthaginian armies in the First (264–241 B.C.) and Second (218–201 B.C.) Punic Wars of Rome (Polybius I, 40, 15 ; III, 46, 7–8 ; XI, 1, 12). Antigonus himself had 75 war elephants at Ipsus in 301 B.C., though he had employed 65 in 317 B.C., and 83 in 305 B.C. Eudamus is stated to have brought 114 of Porus' elephants from the Punjab in 318 B.C., which Eumenes used against Antigonus in the following year. (W. W. Tarn : in *Cambridge Ancient History*, VI, 1927, pp. 477–8, 487, 499, 504).

[71] Philemon : *Neaira*, fr. 47 ; Alexis : *Pyraunos*, fr. 204. Cited by Tarn and Griffiths : *Hellenistic Civilization*, 1952, p. 307.

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there was a matrimonial affinity between the two kings (so that Seleucus became either the father-in-law or son-in-law of Candragupta). We also know from Strabo (XV. 724) that there was a convention establishing a *jus connubii* between the two royal families.[72] And finally Athenaeus (*Deipnosophistes*. 18d) says that Candragupta sent Seleucus a present of some Indian drugs. Incidentally it would seem that Arab accounts are really referring to these exchanges of Seleucus when they say that Alexander received from Kaid four valuable gifts, a virgin of wondrous beauty, a vessel which never became empty, a physician and a philosopher.[73]

(2) Megasthenes (302–288 B.C.) is accredited Seleucus' Ambassador to Sandracottos (Candragupta). His description of the court of the Mauryas is an eye-witness account of great importance which has been preserved for us through the excerpts of later writers. Among other matters he describes in some detail the Caste System with the functions of the various classes, the Government and the Civil Service, the Commerce, the Customs, the Religion and so on.[74]

(3) Antiochus I (281–260 B.C.) sends Daimachus of Plataea as his ambassador[75] to Candragupta's son Bindusāra. The latter (Amitrachates) requests from the Seleucid king some sweet wine, figs and a philosopher. Wine is sent but the last request is refused on the grounds that "it is not good form among the Greeks to trade in philosophers."[76] (Athenaeus XIV. 67, citing Hêgêsander).[77]

[72] *Cambridge History of India*, I, p. 431.

[73] References *in Encyclopaedia of Islam*, II, 1927, p. 534.

[74] See J. W. McCrindle: *The Indika of Megasthenes and Arrian*, Calcutta, 1877. Arrian states (*Anabasis* V. 6.2.) that Megasthenes dwelt with the satrap of Arachosia, Sibyritius, and that he often visited Sandrakottus, the king of the Indians. It has therefore been pointed out that Megasthenes was already the ambassador of Sibyritius during 320–316 before he represented Seleucus. (B. A. Saletore: *India's Diplomatic Relations with the West*, 1958, pp. 116–18.)

[75] Daimachus too wrote a work on India in two books, but Strabo regards him as being the most unreliable of all writers about India. (J. W. McCrindle: *The Invasion of India by Alexander the Great*, 1896, p. 383.)

[76] Müller: *Frag. Hist. Graec.* IV. 421, cited by H. G. Rawlinson: *India and the Western World*, 1916, p. 39; cf. De la Vallée Poussin: *L'Inde aux temps des Mauryas*, 1930, pp. 58–9.

[77] Bindusāra is here called Amitrachates which is that ruler's Sanskrit title Amitraghāta meaning "enemy slayer." Strabo (II.1.9) calls him Allitrochades.

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(4) With the next Maurya Aśoka (c. 270–232 B.C.), we have the first Indian record of foreign contact. In his 13th Rock Edict at Kalsi dated in the 13th year of his accession, Aśoka states that he was in diplomatic contact with the following rulers, Antiyoga, Tulamaya, Maka, Antekina, and Alikyaṣudala, who have been identified as — Antiochus II Theos of Syria (260–246 B.C.), Ptolemy II Philadelphus of Egypt (285–247 B.C.), Magas, king of Cyrene (c. 300–258 B.C.), Antigonos Gonatas of Macedonia (278–239 B.C.), and (probably) Alexander of Epirus (272–258 B.C.)[78] The Edict states that Aśoka's policy of conquest by morality has won victories repeatedly both here and among his borders and as far as a distance of 600 yojanas among the Yona kings, and this is a cause for great satisfaction. There is no direct confirmation of this from western sources, but a wheel with triśūla upon it were found on a Ptolemaic gravestone in Egypt, and it is thought that the revolving wheels in Egyptian temples referred to by Heron of Alexandria (c. 250 B.C.) may be influences from Buddhist India. Heron (*Prop.* 31) says that these bronze wheels were placed in the porticoes of Egyptian temples for those who enter to revolve, the belief being that bronze purifies.[79]

(5) From Pliny (VI. 58) we learn that the Ambassador Dionysios had been sent to India by Ptolemy II of Egypt. It was evidently as a result of this liaison that Indian women, oxen and marbles were exhibited in a triumphal procession at Alexandria in 271–70 B.C.[80] Athenaeus says that in this procession were to be seen Indian women, hunting dogs, cows, and Indian spices carried on camels, while Ptolemy IV Philopater (221–204 B.C.) had a saloon in his house-boat lined with Indian stone.[81] We know of an Indian dog possessed by Zenon,[82] and of an Indian elephant cited in an inscription

[78] cf. Lassen : *Indische Alterthumskunde*, II, p. 256f. Also D. R. Bhandarkar : *Aśoka*, 2nd ed., 1932 ; B. M. Barua: *Aśoka and his inscriptions*, 1946 ; J. Bloch : *Les Inscriptions d'Asoka*, 1950, p. 130.

[79] W. Simpson: "The Buddhist Praying Wheel," in *Journal of the Royal Asiatic Society*, 1898, pp. 873–5.

[80] H. W. Schoff: *The Periplus of the Erythraean Sea*, Ch. 26, Indian dogs and cattle are mentioned in this connection by Callixenus in Athen. V, 201–b, c.

[81] *Deipnosophistes*, IV. 4–6, and V. 25, 39. Cited by H. G. Rawlinson, *op. cit.*, pp. 93–4.

[82] Edgar : in *Annales du Service*, XIX, p. 104.

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from Adulis.[83] Indian figures together with the modelled terra-cotta heads of foreigners have been found at Memphis. They may conceivably date from the time of Ptolemy VII (200–180 B.C.).[84]

(6) According to Polybius (XI. 39), Antiochus III (222–187 B.C.) renewed his alliance with Sophagasenus, the Indian king[85] in 206 B.C. in the Kabul valley (Paropamisadae) and received more elephants. The librarian of Antiochus III was able to describe the Mauryans as living in wooden houses.[86]

(7) Antiochus IV (175–165 B.C.) exhibited 800 tusks of Indian ivory and spices such as cinnamon and nard in his triumph at Daphne in 166 B.C. (Polybius XXX. 25, 12).

(8) Thereafter the Graeco-Bactrian kings come on the scene and diplomatic exchanges give way to conquests. Strabo (XI. 11. 1–2 and XV. 1. 3), relying on Apollodorus' Parthica, says that these kings, in particular Demetrius, son of Euthydemus, and Menander conquered more Indian tribes than any of the Greek successors of Alexander. This included Patalene and the kingdom of Saraostos and Sigerdis, but Strabo himself doubts this, since it would mean that their conquests exceeded even those of the Macedonian.[87] Justin (XLI. 6) called Demetrius (c. 180–165 B.C.) *rex Indorum* or "king of the Indians"; this is fitting, since it was he who first struck bilingual coins.[88] Agathocles was the next who struck coins with the Kharoshṭhī legend; these were found at Taxila and were

[83] Strack: *Dynastie der Ptolemäer*, n. 39; U. Monneret de Villard: *La Scultura ad Ahnâs*, 1923, pp. 87–88.

[84] W. M. F. Petrie: *Memphis*, I, 1909, pp. 16–17, Pl. xxxix, and *Meydum and Memphis*, III, 1910, Pl. xlii, Fig. 140. Some of the figures are suggested to be the result of an Indian colony in Memphis under Persian domination (525–405 B.C.).

[85] Thomas in *Camb. Hist. of India*, I, p. 512 suggests he is Vīrasena, Aśoka's successor according to the Tibetan source Taranata. De la Vallée Poussin (*L'Inde aux temps des Mauryas*, 1930, I, p. 168) holds that Sophagasenus must be a translation of Subhagasena who may be considered to be the father of Vīrasena. Lassen (*Indische Altertumskunde*, II, p. 273) however, identified Sophagasenus with Jaloka.

[86] *Stoph. Byzant*, cited by A. Cunningham: *Coins of Ancient India*, 1891, p. VI.

[87] The Gārgi Saṁhitā claims that the Yavanas reached as far as Pāṭaliputra and occupied it. (K. P. Jayaswal in *Journal of the Bihar and Orissa Research Society*, XIV, 1928, p. 402.)

[88] R. B. Whitehead: in *Numismatic Chronicle*, 1923, pp. 300–1.

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evidently minted there.[89] But the centre of their kingdom was still outside India, for as compared with the 34 coins of Menander found in Taxila, 521 were found at Mir Zakah in Afghanistan.[90] The city of Demetrius was in Afghanistan (Arachosia) between Sistan and Ghazni according to Isidore of Charax (*Parthian Stations*, p. 8f.). There is little evidence for a Demetrias in Sind,[91] and the references in the battles of the Mahābhārata to a brave Yavana king Dattamitra is now shown to be a late interpolation and the passage has been omitted from recent critical editions.[92]

Were it not for the fragmentary notices of classical writers and the numismatic evidence we should have very little knowledge of the foreign relations of India. For Indian historical literature has an astonishingly late beginning, and archaeology has hardly begun to fill in the picture of the Indo-Greeks. Confronted with this handicap we have nevertheless to attempt to supply the cultural background for this period of Greek ascendancy.

When speaking of the Greeks in India it is customary to give a long excursus on the usage of the term for the Greeks — Yavana. For our purpose it is quite sufficient to note that the form in Aśoka's 13th Edict is *Yona*, and that the term is encountered first in India under the form *Yavana* in the 4th century B.C. by the grammarian Pāṇini (IV. 1. 49). The occurrence of the term prior to the Greek advent suggests a borrowing from the Achaemenids: Darius for example calls the Greeks *Yauna* in his Naqshi Rustum inscription.[93] The contemporary Biblical term is *Yawan*,[94] and in Assyria Sargon knows the Greeks as *Yawanai* and calls Greece *Ya-wa-nu*.[95] It is

[89] J. Allan; in J. Marshall: *Taxila*, 1951, II, pp. 856–7.

[90] A. K. Narain: *The Indo-Greeks*, 1957, pp. 78–9.

[91] W. W. Tarn: *The Greeks in Bactria and India*, 2nd ed., 1951, pp. 142, 526.

[92] E. H. Johnston: "Demetrias in Sind?", in *JRAS*, 1939, pp. 217–40; 1940, p. 179. Cf. also "the all-knowing Yavanas" (Mahābhārata VIII, 45, 36: Hopkins: *The Great Epic of India*, p. 392).

[93] H. C. Tolman: *Old Persian Lexicon and Texts*, pp. 44, 46; S. Sen: *Old Persian Inscriptions*, pp. 96–8; D. S. Sircar: *Select Inscriptions bearing on Indian History and Civilization*, 1942, pp. 9–10. Cf. Aeschylus: *Pers.* 176, 562.

[94] cf. C. C. Torrey: in *Journal of the American Oriental Society*, XXV, 1904, p. 302f.

[95] E. Schrader: *Keilinschriften und das Alte Testament*, 1883, 2nd ed., p. 87f. See also E. Meyer: *Geschichte des Altertums*, 1883–4, I, pp. 490–4; II, p. 685f.

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quite evident that the term goes back to the Greek 'IáwY (*Iaon*) denoting the Ionians in Homer (*Iliad*, XIII, 685).

So too is it possible to trace back in time the practice of international marriages, of which we saw an example between Seleucus and Candragupta. Seleucus was himself merely continuing Alexander's policy of fusion. The Macedonian conqueror had arranged mass marriages at Susa in 324 B.C. when 80 of his officers married girls of Iranian aristocracy and 10,000 of his men native concubines. He himself married Darius' daughter Barsine, as well as Roxana (cf. Avestan *raokhsna* : 'shining') a daughter of one of the barons of Soghdiana. His generals married as follows : Seleucus married Apama, daughter of the Soghdian baron Spitamenes (who became the mother of Antiochus I); Hephaistôn married Drypetis, another of Darius' daughters ; and Ptolemy and Eumenes married the two daughters of Artabazos — Artakama and Artonis respectively (cf. Arrian. VII. 4, 4–6). The effect of such social intercourse on the exchange of manners, customs and fashion may be guessed if it cannot be accurately gauged.

In furtherance of his policy Alexander adopted on State occasions Persian dress and court ceremonial including the custom of prostration (*proskynesis*) before the king.[96] The earliest coin issued after Alexander's victory is a dekadrachm of himself wearing a Persian helmet, cuirass and cloak.[97] He appointed his Persian father-in-law Artabazos viceroy of Bactriana, and another Persian, Proexes, viceroy of the Kabul area. In India Poros and Mazaeus served as his satraps, and in the Punjab Sopeithes, who is now argued not to be the Sophytes of the rare coin with Greek portrait which may have been minted in the Oxus region.[98]

While we are on the subject of numismatic influence on India we may offer a few instances to establish it beyond question. The

[96] W. W. Tarn : *Alexander the Great*, 1948, I, p. 79. Plutarch (*Themistocles*, 27) says that obeisance was to the Persian King as an image of the god.

[97] B. V. Head : *Historia Numorum*, 1911, p. 833, and in *Numismatic Chronicle*, 1906, Pl. I, 8. Coenus implies that the Greeks had "degenerated into foreign ways" by adopting the Persian dress simply because their own national dress could not be transported to them over such distances (*Curtius*, IX, 3, 11.)

[98] P. Gardner : *Catalogue of the Coins of the Greek and Scythic Kings of Bactria and India*, 1886, Pl. I. 3 ; and R. B. Whitehead in *Numismatic Chronicle*, 1943, pp. 60–72.

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owls of Athens brought through trade to the East were imitated in North Indian coins in the 4th century B.C.[99] Some of the coins of Maues (c. 70 B.C.), the earliest Saka ruler in India identified with the Moga of the Taxila copperplate grant, are directly imitated from the coins of Demetrius and Apollodorus, but the form of the Greek inscription, *Basileôs Basileôn Megalou* (Great King of Kings), is of Parthian origin, occurring on the coins of Mithradates I (c. 171–138 B.C.).[100] Silver coins of the western Kṣatrapas Nahapana and Castana are copied from the hemidrachms of the Greek princes of the Punjab, e.g., Apollodotus Philopator, and seem to follow the same Persian weight standard.[101] The Adumbaras Mahādeva and Rudravarman copied the hemidrachms of Apollodotus I Soter,[102] while Greek hemidrachms again influenced the coins of the Kuṇinda Amoghabhūti.[103] Heracles and a lion hunt had been used by Maues,[104] and it appears that the Heracles on the coins of Lysias and Zoilus have served as the prototype of Viśvamitra on the coins of Dharagho ṣa.[105] The drachmas of Rājuvula (40–20 B.C.) found over a wide area are copied from the coins of Strato II though the Greek legends on the coins are quite corrupt.[106]

On the silver and copper coins of Śaka kings Azes I and Azilises the Greek deities Zeus, Heracles, Pallas and Poseidon appear, and for the first time an Indian goddess, Lakṣmi is introduced.[107] Moreover we may note that Liaka Kusūlaka copied the coins of Eucratides I,[108] and Kujula Kadphises the Kushan king imitated the coins of the Emperor Claudius (41–54 A.D.).[109] The fact that Kujula Kadphises conquered the Indo-Greek kingdom from Hermaeus is suggested by the coins on which both rulers are named, one in Greek and the other in Kharoshṭhī, and by other coins on which he alone is named in the two languages on the two sides of the coins.[110] Wima Kadphises adopted the Roman weight standard, and pieces of the weight of two *aurei* were struck by him. The adoption of gold

[99] E. J. Rapson : *Indian Coins*, 1897, p. 3.
[100] *Ibid.*, p. 8. [101] *Ibid.*, p. 21.
[102] J. Allan : *Catalogue of the Coins of Ancient India*, 1936, pp. XV, LXXXV; and A. Cunningham : *Coins of Ancient India*, 1891, p. 54.
[103] Allan : *Ibid.*, p. XV. [104] *Ibid.*, p. LXV. [105] *Ibid.*, p. XV.
[106] *Ibid.*, pp. CXIV, CXV.
[107] C. J. Brown : *The Coins on India*, 1922, p. 30.
[108] J. Marshall : *Taxila*, 1951, I, p. 39.
[109] *Ibid.*, pp. 155, 166, 819 (249). [110] Rapson : *op. cit.*, p. 16.

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coins by the Kushans is probably the result of the influx of Roman gold into India at the time.[111] The adoption of the Roman standard may be explained by the fact that exports to the Roman Empire from India were paid for in Roman gold, and the auraeus had acquired the status of a current coin in India. As one writer has said, "It was only natural that those Kushan invaders should seek to win acceptance of their new gold currency by placing it on an equality with the popular Roman gold."[112] Finally the very Greek words for coins *stater* and *drachma* occur in Saka documents (probably 2nd or 3rd century A.D.) written in the Kharoṣṭhī language in Chinese Turkestan, in the forms *sadera* and *trakhma*,[113] while *stater* occurs in Kharoshṭhī inscriptions in India itself as a measure of weight.[114] In Indian literature the Roman *denarius* appears in the form *dīnāra*,[115] the Greek *drachma* in the form *dramma*, and *stater* as *statīra*.

A recent study of a papyrologist makes it very probable that Indian state organization of finance as known through Kauṭilya was affected by Hellenistic ideas. An almost certain evidence of contact is suggested by the two anecdotes found in the Pseudo-Aristotelian *Economica* relating to financial matters, which occurs also in the *Arthaśāstra*. The points of contact established between Kauṭilya and Hellenistic civil and state institutions include :

1. The lease of mines with payment of fixed rent and percentage of output.
2. The name and function of the financial director in the *Arthaśāstra* is almost identical to the Ptolemaic *dioecetes*.
3. The planned economy of the Indian land organization resembles the Ptolemaic agrarian system.
4. Monopolies apply to all processes of production and trade excepting in textile and leather both among the Ptolemies and in the *Arthaśāstra*.
5. The organization of the salt trade in India bears a striking detailed resemblance to that in Ptolemaic Egypt.[116]

[111] *Ibid.*, pp. 17–18. [112] C. J. Brown : *op. cit.*, p. 34.

[113] F. W. Thomas : "Drakhme and Stater in Khotan," in *J.R.A.S.*, 1924, p. 671f.

[114] S. Konow : *Kharoshṭhī Inscriptions*, (C.I.I. II. Pt. 1) 1929, pp. 98–9.

[115] Cf. Fleet : *Corpus Inscr. Indicarum*, III, p. 265.

[116] F. M. Heichelheim : "New light on the influence of Hellenistic financial

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Whether it was the Indo-Greeks who transmitted an economic system which was common to all the Hellenistic states is of course a question which is at present impossible to answer. At least it is conceivable that the department of foreign affairs at Pāṭaliputra called *astynomoi* by Megasthenes was modelled on the Greek *proxenoi*, especially in the event of the demise of a foreigner of administering his estates and transmitting the effects to his heirs.[117] Resemblances had been pointed out between fiscal and bureaucratic arrangements of contemporary Syria and Egypt with those of Kauṭilya (including for example the king's decree superseding all other sources of law), but recently these were considered to be in the nature of "similar historical circumstances producing the same result rather than of the conscious borrowing of institutions."[118]

We are on more stable ground when we investigate the foreign influence on early Indian astronomy. An astronomer of repute has made it clear that Hindu astronomy originates from three components, one of which is the indigenous contribution, the second is the Babylonian arithmetical method, and the third is the pre-Ptolemaic Greek geometric systems. It is evident that the Babylonian idea of calculation in multiples of 60 (sexagesimal) spread both to the Greeks and to the Hindus, the latter contributing the final step, the use of the place value notation also for the smaller decimal units.[119] There is an interesting early western tradition which may of course not be authentic that at about the time of the construction of the Tower (i.e., of Babel) a certain Indian of the race of Arphaxad made his appearance: a wise man and an astronomer whose name was Andubaris. It was he who first instructed the Indians in the science of astronomy.[120] It has been shown that Babylonian planetary texts explain whole sections in

Administration in the Near East and India," in *Economic History*, February 1938, pp. 1–12.

[117] V. Smith: in *Indian Antiquary*, 1905, pp. 200–201.

[118] U. N. Ghoshal: in J. N. Banerjea Volume, 1960, pp. 76–85.

[119] O. Neugebauer: "The exact sciences in antiquity," 1951, chapter VI, and "The Babylonian Planetary Theory," in *Proceedings of the American Philosophical Assoc.*, vol. 98, 1954, pp. 60–89.

[120] *Paschal Chronicle*, p. 36; Cory's *Ancient Fragments*, ed. E. R. Hodges, 1876.

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the *Pañca Siddhānta* of Varāha Mihira (504–87 A.D.) a work based as its name suggests on five leading astronomical treatises.[121] Babylonian elements in Varāha Mihira include the description of planetary phenomena by means of step functions, and also the fundamental period relations and special parameters. He uses an equivalent of the cuneiform values for the synodic periods for Saturn and Jupiter, and the synodic arc for Venus. In the Hindu system degrees are replaced by days, but it is undeniable that the linear method of calculating planetary positions is actually founded on Babylonian values for synodic arcs.[122] The use of "tithis," that is of thirtieths of mean synodic months in Babylonian planetary texts, is characteristic in Hindu time reckoning, and the occurrence of the ratio 3 : 2 for the longest and shortest day might be taken as a direct Mesopotamian influence as was proved by using the Babylonian lunar ephemerides of the Seleucid period.[123] The decans, in which Babylonian elements also prevail, and which "in the last analysis is the actual reason for the 24 hour system" also reached India but in an astrological form.[124] The Babylonians themselves had a high reputation in astrology, and Diodorus (II. 31) says they surpassed all peoples in it. Although planetary inequalities were first separated by the Babylonians, it is not certain that the Sūrya Siddhānta learnt this method directly from them[125] rather than through the Greeks. It would seem that the Babylonian methods of parameters for the lunar motion and computation of eclipses reached Tamil India only through the medium of Hellenistic astronomy and astrology (for they were found recently in two papyri of c. 90 A.D. and c. 250 A.D.).[126] Indirect transmission is also suggested in the case of the zodiac.

Notions concerning the zodiacal belt, the ecliptical signs and the zodiacal scheme gradually developed in Babylonia. Indeed the whole zodiac with its 12 signs is now shown to be of Babylonian

[121] cf. Schnabel : in *Zeitschrift fur Assyriologie*, 35, 1924, p. 112 ; 37, 1927, p. 60.

[122] O. Neugebauer : *The Exact Sciences in Antiquity*, 2nd ed., 1957, pp. 172–3.

[123] *Ibid.*, p. 186, n. 2 (cf. Kugler : *Babylonische Mondrechnung*, 1900, pp. 82–195).

[124] *Ibid.*, p. 82.

[125] As is supposed by P. C. Sengupta : in *Journal of the Department of Letters* (University of Calcutta), XVIII, 1929, pp. 55–6.

[126] *Ibid.*, p. 167 ; and "Tamil Astronomy," in *Osiris*, 1952, p. 253f.

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origin since most names of Greek zodiacal signs are translations or small modifications of the Babylonian names.[127] However, it should be noted that in the relevant Babylonian text of 418 B.C. the reference is not to the zodiacal signs but only to elliptical constellations suggesting that the zodiac was not attested by this time in Mesopotamia.[128] Be that as it may the names of the zodiac and planets in Āryabhaṭa (499–500) and in Varāha Mihira (*Vṛihat Jātaka*. I. 8) are certainly of Greek origin, as the following table shows :[129]

(*a*) ZODIAC

Greek	*Sanskrit*	*Latin*
Krios	Kriya	Aries
Tauros	Tāvuri	Taurus
Didumoi	Jituma	Gemini
Karkinos	Karkin	Cancer
Leōn	Leya	Leo
Parthenos	Pāthena	Virgo
Zugon	Jūka	Libra
Scorpios	Kaurpya	Scorpio
Toxotēs	Taukshika	Sagittarius
Aigokerōs	Ākokera	Capricornus
Hudrochoos	Hṛdoga	Aquarius
Ikhthus	Itha, Ithusi	Pisces

(*b*) PLANETS

Greek	*Sanskrit*	*Latin*
Hēlios	Heli	Sol
Hermēs	Himna	Mercurius
Arēs	Āra	Mars
Kronos	Koṇa	Saturnus
Zeus	Jyau	Jupiter
Aphroditē	Āsphujit	Venus

[127] B. L. Van der Waerden : "History of the Zodiac," in *Archiv fur Orientforschung*, XVI, 1952–3, pp. 216–30. [128] Neugebauer : *op. cit.*, p. 140.
[129] L. von Schroeder : *Indiens Literatur und Cultur*, 1887, p. 726, and J. Burgess in *JRAS*, 1893, pp. 746–47.

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The Indian Horā texts, it has been observed, could only have been composed at a later date than the first noteworthy writer of astrology in Latin, Firmicus Maternus (between 336–54 A.D.), wherein the system of the 12 mansions first occurs.[130] The Greeks had only taken up the planets' lordship of the day for astral purposes. It was the Romans who took them up as a detail of the Calendar, and this became general by the time of Dio Cassius, c. 230 A.D. Evidently it was from Paulus Alexandrinus, who wrote in c. 378 A.D., that Āryabhaṭa (499 A.D.) introduced the use of the planets to designate the seven days of the week.[131] Constantine had made Sunday the first day of the week in 321 B.C., and this order of the planets beginning with the Sun is found in Varāhamihira, who teaches what may be done on the day of each of the planets.[132]

On the other hand, Hellenistic mediation is suggested in the case of the cyclic scheme of intercalations which was introduced in the 5th century B.C. in Babylonia, then formed the basis of the calendar of the Seleucid Empire, and appeared in "slight disguise" in the luni-solar computations of the Romaka and Pauliśa Siddhānta.[133] These two treatises are obviously western in origin, as is evident from their names. The Pauliśa is evidently based on the work of Paul of Alexandria (c. 378 A.D.), as that Muslim student of Hindu astronomy, al Biruni (1031), actually affirms.[134] And Romaka is obviously Rome : Varāha Mihira (XII. 39) places Romaka 90° west of Laṅkā (Ceylon). In many manuscripts of the Sūrya Siddhānta (c. 1000 A.D.) occurs the exhortation : "Go therefore to the city of Romaka where you reside. There, undergoing incarnation as a barbarian, owing to a curse of Brahma, I will impart to you this science."[135] Whether or not this is regarded as an interpolation, the Gārgi Samhitā too says something of the sort : "This science

[130] *Matheseos Libri*, viii ; H. Jacobi : *De Astrologiae Indiae Horâ Appellatae Originibus*, Berlin, 1872.

[131] Although the earliest use of the planetary name of a day in Indian epigraphy is slightly earlier in 484 A.D.

[132] J. F. Fleet : "The use of the Planetary days of the Week in India," in *Journal of the Royal Asiatic Society*, 1912, pp. 1039–46.

[133] Neugebauer : *op. cit.*, 2nd ed., p. 7. The rules for the computation of the lunar motions in Varāha Mihira are based on processes now known to us from Greek papyri and ultimately in cuneiform tablets (*Ibid.*, pp. 165, 172).

[134] He identifies Saintra, the city of Pauliśa, as Alexandria.

[135] G. R. Kaye : Hindu Astronomy, *Memoirs of the A.S.I.*, 18, 1924, p. 108.

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(astronomy) originated among the Yavanas. Therefore they are honoured as Riṣis (seers)," and indeed the author of this treatise takes Yavanapura as the meridian instead of Ujjain.[136] Finally Varāha Mihira himself says "The Greeks indeed are foreigners, but with them this science (astronomy) is in a flourishing state."[137]

We are now able to take back by another four centuries our knowledge of Indian astronomy from the medieval period of the Five Treatises. And here we actually find a Greek planetary text translated into Sanskrit. This is the Yavanajātaka of Sphujādhvaja, written in 269 A.D., which is a versification of a translation made by Yavaneśvara in 149 A.D. In its concluding portion detailed astronomical instructions are given for the use of Indian astrologers. In this Graeco-Indian manuscript the methods in use for the synodical periods of the superior planets is still closely related to those developed in Mesopotamia in the Seleucid period.[138] As a result of the high regard held for Greek and Roman astronomy in Medieval India, and the actual translation of a Greek text, concepts and even terms were adopted outright. Here for example are some Greek technical terms as transcribed phonetically or approximately reproduced in Sanskrit : *lepton* becomes *liptā* ("minute"); *apoklima* remains *āpoklima* ("inclination"); *dekanos* becomes *dṛkāṇa* ("decan"); *hora* remains *horā* ("hour" or "horoscope"); *diametron* becomes *jyāmitra* (literally "friend of the chord"—"diameter"). Even if we regard *trigonos* = *trikoṇa* ("triangle") as a common Indo-Aryan word,[139] as well as *medhya* corresponding to the Latin *medius* ("middle"), we still have left further parallels in *Kendron*—

[136] H. G. Rawlinson : *India and the Western World*, p. 173, n. 1. Ptolemy incidentally knows Ujjain as Ozênê, as does the Periplus (Sec. 48) which describes it as the place from which goods are sent to the port of Barygaza for export. (McCrindle's *Ancient India as described by Ptolemy*, 1927, p. 155.)

[137] *Bṛhat Saṁhitā*, II, 15. An attempt to negate Greek influences comes from S. R. Das ("The alleged Greek influence on Hindu Astronomy," in *Indian Historical Quarterly*, IV, 1928, pp. 70–75). He points out that Varāha's reference is in connection with astrology and not astronomy, as is the case in the 16 other mentions of the Yavanas. He suggests that Puliśa need not be Paulus since the name is known also of an Indian sage. He claims that the theory of heliacal risings and settings of stars and planets originates in India and was introduced into Europe through Greek mediation.

[138] D. Pingree : "A Greek linear Planetary Text in India," in *Journal of the American Oriental Society*, vol. 79, October–December 1959, pp. 282–4.

[139] L. Renou and J. Filliozat : *L'Inde Classique*, 1953, II, p. 193.

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Kendra (distance of a planet from the apsis of its orbit); *Duton—Dyūtam* (the seventh mansion); *Epanaphora—Paṇapharā* ("rising"); *Sunaphe—Sunaphā* (a planetary conjunction); and *Anapha—Anaphā*.[140] Could one ask for clearer cases of borrowing? It has been observed that the technical terms in Varāha Mihira are all used in the same sense in the Eisagoge of Paulus Alexandrinus, and occur in all astrological works after c. 4th century A.D.[141] Varāha Mihira also often cites the author Yavaneśvara.[142] Brahmagupta (628 A.D.) refers to a certain Yavanasiddhānta.[143]

Quite apart from these terms there are strong indications of the adoption of Greek concepts and methods in the Indian system. First of all there is such a coincidence in the Greek and Hindu theories of epicycles in accounting for the motions of planets and in calculating their true places "as almost to preclude the idea of independent origin or invention." The division of the circle into signs, degrees, minutes and seconds is the same in both systems.[144]

Next it has been noted that the table of sines in the Pauliśa Siddhānta follows the Greek method of Ptolemy's chords;[145] to be precise Pauliśa's value for π was obtained from Ptolemy's formula for finding a chord of an arc in terms of the chord of double the arc. The sine tables of Āryabhaṭa (c. 628) was reduced from Pauliśa's table of 24 sines, which was ultimately Ptolemaic, but more trigonometry was applied to it.[146] However, it should be pointed out that the Indian systems do not appear to be familiar with Ptolemy's modification of the lunar theory,[147] in c. 140 A.D. Moreover there is no agreement between the longitudes of the so-called apogee (aphelion) of Mars and the other superior planets as given by Ptolemy and Āryabhaṭa, and this implies that they were freshly determined by the latter.[148] Āryabhaṭa has been regarded as being

[140] L. von Schroeder: *op. cit.*, p. 726.

[141] J. Burgess: in *Journal of the Royal Asiatic Society*, 1893, p. 748.

[142] C. T. Colebrooke: *Miscellaneous Essays*, 1837, II, p. 530.

[143] B. Chatterjee in *Journal of the Royal Asiatic Society of Bengal, Science*, XV, 1949, no. 2, p. 86.

[144] Whitney and E. Burgess in *Journal of the American Oriental Society*, VI, 1860, II, 34–5, and pp. 473, 477. [145] J. Burgess: *op. cit.*, p. 759.

[146] G. R. Kaye: in *Journal of the Royal Asiatic Society*, 1910, p. 752.

[147] O. Neugebauer: "The transmission of Planetary Theories in Ancient and Medieval Astronomy," in *Scripta Mathematica*, N.Y., 1955, p. 7.

[148] P. C. Sengupta: *op. cit.*, pp. 53–4.

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the first Hindu astronomer to make use of the possibly imported idea of the epicyclic theory co-relating original data of his predecessors and his own determination of the motions of the sun, moon and five planets.[149]

Next the Hindu treatment of planetary latitudes in the combination of ecliptic and equatorial co-ordinates appears also in Hipparchus' (c. 150 B.C.) discussion of Aratus' Phenomena and the parallelism is thought not to be accidental.[150]

Next the adoption of the zodiac, to which we have already referred, resulted in all but displacing the native Nakṣatra divisions of the ecliptic (already attested in the Atharvaveda). The zodiac which was introduced had the double signification both as designating particular portions of the ecliptic and as measures of any arc.[151]

In addition to these one writer expresses his conviction that the following further features were introduced through the Greek into Indian astronomy:[152] (1) The notion of parallax and methods of calculating it; (2) methods of calculating ellipses; (3) the notion of heliacal settings and risings of heavenly bodies chiefly with astrological applications; (4) correct rules for calculating the length of day and night and oblique ascensions, etc.; (5) the length of the year was revised; (6) and finally planetary week day names were introduced.

In the field of mathematics we may begin with the observation that the old view that the theorem of Pythagoras occurs in a general form prior to the Greek formulation in the Sanskrit Śulbasūtras has not found much favour, and it is also disputed that the irrational was discovered by the Hindus of the early period traditionally assigned to this treatise.[153] On the other hand a number of Indian mathematical ideas have been attributed to Greek sources: the trapezium problems in Āryabhaṭa may, it is suggested, be traced to Heron, as also shadow problems which ultimately go back to Thales; progressions which occur in Greek writings from Hypsicles to Diophantus; a problem known as the

[149] B. Chatterjee: *op. cit.*, p. 88.
[150] O. Neugebauer: *op. cit.*, p. 25.
[151] G. R. Kaye: *op. cit.*, p. 40.
[152] *Ibid.*, p. 40, and "Influence grecque dans le developpment des mathematiques hindoues," in *Scientia*, 1919, XXXV, pp. 1–14.
[153] G. R. Kaye: "The Source of Hindu Mathematics," in *Journal of the Royal Asiatic Society*, 1910, p. 752. Also see Keith in *ibid.*, 1909, p. 569f.

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epanthem copied possibly from Thymarides or Iamblichus. And it is further contended that Brahmagupta treats of rational solutions of the right-angled triangle after Greek methods, of cyclic quadrilaterals after Ptolemy, of surds after Euclid and others, of indeterminate equations of the second degree after Diophantus.[154] It is doubtful whether Indian mathematicians could have been acquainted with so large a number of Greek sources, and until it can be shown more exactly how these methods could have been transmitted through some single source we may contemplate the possibility of a contact without assuming it to be certain. There is certainly a difference of emphasis, and the comparisons and contrasts between Greek and Hindu mathematics has been analyzed by one writer.[155]

Indian authors make much of the claim that the decimal value of zero was invented in India, but it should nevertheless be recalled that "both place-value notation and zero symbol are in ordinary use in Babylonian and Greek astronomy. The Hindu innovation consists only in transferring this method to a number system with decimal order."[156] And it is suggested that the decimal place value notation is a modification of the sexagesimal place value notation with which the Hindus had become familiar through Hellenistic astronomy.[157] The zero sign which was in full use in Babylonian mathematics from 300 B.C. onwards was not a letter or a symbol but a mere separation mark.[158] It was in other words an empty space, and it is notable that in India the zero symbol is called *śūnya*, which literally means "empty." The Gurjara inscription of 594 A.D. is the earliest epigraphic instance of the decimal notation in India, but the zero is only in the form of a dot, *bindu*.[159] The zero form as a small circle appears in Indian epigraphy in the

[154] *Ibid.*, pp. 749–60, esp. p. 757. Cantor (*Geschichte der Mathematik*) proposed that the Śulba Sūtras had been influenced by Hero of Alexandria (c. 215 B.C.). G. Thibaut (*Astronomie, Astrologie und Mathematik*) noted the absence of Greek terms in Indian mathematics as against Indian astronomy.

[155] B. N. Seal: "Hindu and Greek contributions to Mathematical Sciences," in *Journal of the University of Punjab Historical Society*, VIII, July 1935, Pt. 1, pp. 62–70.

[156] Neugebauer: in *Scripta Mathematica*, 1955, p. 27, n. 6 and 21.

[157] Neugebauer: *The Exact Sciences in Antiquity*, 1957, p. 189.

[158] *Ibid.*, pp. 27, 14.

[159] B. Datta and A. N. Singh: *History of Hindu Mathematics*, 1935, p. 48f.

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late 9th century A.D. but is already anticipated two centuries earlier in Indo-China and S.E. Asia.[160]

In the medical field we may also establish some definite connections between India and Greece. We have to begin with the statement of Nearchus as reported by Arrian (*Indika* XV) that Alexander had all the most skilful of the Indian in the healing art collected round him, and they were able to cure not only snake bites, which the Greek physicians were unable to do, but also diseases and bodily pains. Introduced as they were to these new drugs, the Greeks must have wished to acquire them. This is suggested by the fact that Candragupta sent some as a present to Seleucus, as we had occasion to note earlier. Pliny adds (XVI. 135) that the Seleucids had attempted to naturalize certain Indian plants such as Amomum and nardum. Aśoka claims in his Second Rock Edict at Girnar, Kalsi and Jaugada that in his own and neighbouring kingdoms, including that of the Yona king Antiyoga he established medical treatment for men and for animals and caused herbs to be planted there.[161] Indian elements in the *materia medica* of Dioskorides and earlier authors include the Greek equivalents of such Indian substances as *pippali* ("pepper"), *kuṣṭha* (a plant), *Śṛṅgavera* ("ginger"), *Kardama* ("cardamom"), *vacā* ("an aromatic root"), *guggulu* ("bdellium, a fragrant gum"), *mustāka* ("a fragrant grass, *Cyperus rotundus*"), *śarkarā* ("sugar"), *tila* ("sesamum"), etc.[162] Dioskorides (1st century A.D.) in his Herbal specifically states that the following plants were brought from India for medicinal purposes : Kardamomum (I. 5), Nardos (I. 6), Malabathrum (I. 11), Kostos (I. 15), Calamus Aromaticus (I. 17), Agallochon (I. 20), Nascaphthum (I. 22), Bdellion (I. 80), Aloe (III. 25), and Indikon or indigo from Indian reeds (V. 107).[163] For instance, *peperi* (from the Sanskrit *pippali*) is prescribed in the Hippocratic treatise "The illness of women" as an ingredient in the composition of the "Indian medicament for the eyes,"[164] while Theophrastus too in his "History

[160] *Ibid.*, pp. 81–2, and J. Needham : *Science and Civilization in China*, 1959, III, p. 10f.

[161] Hultzsch : *Corpus Inscriptionum Indicarum*, I, p. 4.

[162] Royle : *An essay on the antiquity of Hindu Medicine*, 1837.

[163] R. T. Gunther : *The Greek Herbal of Dioskorides*, New York, 1959.

[164] J. Filliozat : *La Doctrine Classique de la Médicine Indienne*, 1949, p. 212. He notes that Suśruta brings in pippali frequently in prescriptions for eyewashes.

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of Plants" (IX, 19, 4, cf. Athen. II. 66e, f) knows of pepper as a medical drug. Pliny (XII. 4 (16)) mentions the red bark of a root called Macir imported from India and made into a decoction for dysentery. Camphor, a distinctly Indian product, is mentioned in the Syrian book of medicine of the Greek medical school of Edessa (3rd–5th century A.D.).[165] This is perhaps the full extent to which we can establish a Hindu influence on Greek medicine. For the reverse case there are suggestions of contact at a deeper level, and we are compelled to assume that just as the Greek Ctesias was resident court physician to the Achaemenid monarch Artaxerxes at Susa, so there were Greek physicians established further East. Long before Ctesias, a Greek physician from Croton by the name of Demokedes, whom Herodotus (III. 125–137) calls "the best skilled in his art of all men then living," was taken captive to Susa in 522 B.C. and cured Darius by exchanging the violent treatment of the Egyptians for milder means. A strong resemblance to certain Greek ideas is evident in the medical compendium of Caraka. The latter, a native of Kashmir, was the medical adviser of Kaniṣka, according to Chinese sources,[166] but he only edited the earlier tantra or treatise of Agniveśa, who was in turn taught orally by his master Ātreya,[167] all of which considerably complicates the problem. In this treatise we find the four humours listed as air, bile, phlegm and blood, and they are described as being essential to life and their derangement the cause of disease. Similarly Hippocrates and Plato list blood, phlegm, black and yellow bile as the chief humours of the body and Plato says (*Timaeus* 63) that "the disproportion of the elements produces degeneration of the humours and this degeneration again causes the different diseases."[168] The Kauśika Sūtra is alleged to have the doctrines of three of the humours,[169] and it is therefore suggested that blood was added as a fourth under Greek influence.[170] The blood as an exciter of disease is reminiscent of Greek humeral pathology, though

[165] Schoff : in *Journal of the American Oriental Society*, XLII, p. 359.
[166] cf. Levi in *Journal Asiatique*, 1896, VIII, p. 447f.
[167] A. F. R. Hoernle: "Studies in Ancient Indian Medicine," in *Journal of the Royal Asiatic Society*, 1909, p. 997.
[168] G. N. Banerjee : *Hellenism in Ancient India*, 2nd ed., 1920, pp. 197–8.
[169] A. B. Keith : *A history of Sanskrit Literature*, 1928, p. 514.
[170] L. Edelstein, ed : *Hindu Medicine* by H. R. Zimmer, 1948, p. L.

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it is admitted that it could also be connected with the harmony of the three Guṇas of the Sāṁkhya philosophy.[171] On the question of blood it should be noted that Yavana leeches are actually mentioned in Indian texts.[172] Another striking correspondence in Caraka is the prescribing of rules for the Indian doctor, which resembles very minutely the oath which the Greek physician, according to Hippocrates (d.c. 370 B.C.). had to take upon entering his duties.[173] The resemblance is not only in ideas but also in sentiments and expressions, as the juxtaposing of passages from Caraka and Hippocrates indicates.[174] Again the description of the carpus and tarsus in the Greek osteology of Celsus in the 1st century B.C. agrees with the descriptions of the Talmud and of Caraka, but the analogy cannot be carried further in view of the absence of early Greek lists of bones of the human body.[175] It is perhaps significant that Caraka was present at a medical conference where he learned some of the views of a physician of Balkh (Vālhīka) in Bactria.[176]

All the ancient Indian medical texts teach that nervous activity stems from an interior organic current of air. This wind is the soul and animating spirit of the body. A similar physical conception of the wind exists also in Greek medicine, and one writer has claimed that the 4th century B.C. Hippocratic treatise "Of the Winds" was influenced by the Indian idea which existed already in the Brāhmaṇa period in the 8th century B.C.[177] But against this it has been stated that the Greek treatise has antecedents in its own tradition, and that if there was any question of imitation from an Indian model it was in generality and not in detail.[178]

On the contrary a reverse influence seems possible in the theory of vision where the belief in an intra-ocular fire already expressed by Alcmeon of Protone in the 6th century B.C. and elaborated by

[171] J. Jolly : *Indian Medicine*, tr. C. G. Kashikar, 1951, pp. 61 and 28.

[172] *Ibid.*, p. 27.

[173] See W. H. S. Jones : *The Doctor's Oath, an Essay in the History of Medicine*, Cambridge, 1924.

[174] Goblet d'Alviella : *Ce que l'Inde doit a la Gréce*, 1897, pp. 97–98.

[175] A. F. R. Hoernle : *Studies in the Medicine of Ancient India*, 1907. pp. V–VI.

[176] *Essays and Discourses* by Dr. Prafulla Chandra Ray, 1918, p. 13f.

[177] Götze : "Persiche Weischeit in griechischen Gewande," in *Zeitschrift fur Ind. und Iran*, II, 19, 3.

[178] Filliozat : *op. cit.*, pp. 188–89.

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Plato was analogous to the Indian philosophy of Nyāya-Vaiśeṣika.[179] Suśruta similarly describes a fire which is a form of the bile called *ālocaka* situated in the eye which is the medium of sight.[180]

Moreover the Hindu theory of the six essences of qualities or flavours (*rasa*) is strikingly similar to the corresponding Greek concepts *glyky, liparon, stryphnon, halmyron, pikron, drimy*, excepting that in Hindu medicine these qualities form the basis of dietetics and pharmacology.[181] Further detailed parallels in medical practice in ancient Greece and India[182] may be listed briefly without any insistence on direct borrowing :

(*i*) The three stages of fever, raw, ripening and ripe, corresponding to the Greek *apepsia, pepsis* and *acme.*
(*ii*) The division of healing remedies into hot and cold, or dry and oily.
(*iii*) The healing of diseases by remedies of opposite character.
(*iv*) Emphasis on prognosis in the characteristic Hippocratic manner.
(*v*) The influence of seasons in dietetics.
(*vi*) The recommending of intoxicating drink contrary to Indian religious practice.
(*vii*) The quotidian, tertian and quartan fever.
(*viii*) The eating of earth in chlorosis.
(*ix*) The birth of twins by division of the quantity of semen.
(*x*) The vitality of the foetus in the 7th month and the contrary in the 8th.
(*xi*) The paracenesis in dropsy.
(*xii*) The method of lithotomy (removing stones) in surgery, and it goes without saying that many of the same surgical instruments are found in Greece and in India.

More detailed studies on these concordances is necessary, and comparisons with contemporary Babylonian and Egyptian

[179] T. Gomperz : *Les penseurs de la Gréce*, p. 185, n. 1.
[180] Filliozat : *op. cit.*, p. 196. [181] Edelstein : *op. cit.*, p. XLIX.
[182] A. Webb : *The historical relations of Ancient Hindu with Greek Medicine*, 1850, p. 34 ; Liétard in *Bulletin de l'Academie de médicine*, 1896, Mai 5 ; 1897, Mai 11 ; and J. Jolly : *Indian Medicine*, 1951, tr. C. G. Kashikar, p. 27.

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practice[183] must be made, before we can with justification come to any definite conclusion. Meanwhile one important piece of evidence has come to our notice which bolsters the Greek claim. Galen (whose pathology was incidentally founded on the doctrine of the 4 humours) tells of an Indian physician who lived and studied at Alexandria[184] (c. 150 A.D.).

Possible exchanges between India and Greece in the realm of philosophy have aroused much speculation. Particularly difficult has it been to explain the parallels in the times before Alexander's conquest. It is likely that Greek colonies were established in the Middle East, for Herodotus says (VI. 19) that Darius took prisoners from Miletus to Susa and settled them in Ampe, a city on the shores of the Erythraean Sea, near the spot where the Tigris flows into it. Remains of a Greek colony have now been excavated at the island of Failaka off Bahrein in the Persian Gulf.[185] He also informs us (IV. 204) that Darius took a part of the inhabitants of Barka in Libya and transported them to Bactriana, where he settled them, and to his time the place was still inhabited. If this colony did exist it is still problematic that they continued on the one hand to maintain a contact with their homeland, and on the other to immediately interest themselves with the philosophy of the Indian sages across a formidable land barrier. It is more likely that some Greek traveller with an inquiring mind learned the customs and beliefs of foreign lands. Hekataeus (d. c. 476 B.C.) son of Hegesander of Miletus was one such. He survived the Persian wars, visited Egypt and many countries, and his geographical works included descriptions of Asia, which embodied knowledge of the geography and people of India.[186] Similarly Democritus (c. 460–357 B.C.) claims he wandered about until his 80th year and saw the greatest portion of the known world, and came in contact with a large

[183] For Bibliographies see M. Goldstein: *Internationale Bibliographie der altalegyptischen Medezin*, 1850–1930, Berlin, 1933; and G. Contenau: *La médecine en Assyrie et Babylonie*, Paris, 1938.

[184] Hippocr. Epidem, iii, Tom XVII, para. i, p. 603, ed. Kühn. Cited by A. Weber: in *Indian Antiquary*, 1901, p. 287, n. 57.

[185] E. Albrechtsen: in *Illustrated London News*, August 27, 1960, p. 351f., identifies the place with the island of Ikaros whose situation is described by Arrian (*Anab.* ch. 20) who says that at the time of Alexander it had already a shrine of Artemis on it.

[186] See *Hecataei Milesii Fragmenta*, Berlin, 1831.

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number of men.[187] Aelian says (Var. Hist. IV. 20), "Then he came to the Chaldaeans, and to Babylon, and to the Magi, and to the sages of India."

But since as we have seen the Indian troops of Xerxes constituted the earliest recorded extensive contact of India with Greece, the alleged Indian influence on the Philosophy of Pythagoras is scarcely possible, and the theory has in any case long been rejected.[188] We may briefly examine the basis for this negative conclusion. If it is argued that Skylax was Pythagoras' informant, as he undoubtedly was of Herodotus, then we have to remember that the explorer returned from India by 509 by which time Pythagoras had finally settled in Italy c. 529, where he died not later than 500 B.C. These last years were certainly not decisive in formulating the ideas of the philosopher since his belief in the doctrine of transmigration is attested by Xenophanes in c. 540 B.C. The story that Pythagoras himself travelled to the Brahmins is post-Aristotelian, being reported by Alexander Polyhistor,[189] while Herodotus, who was an admirer of Pythagoras, says nothing of the sort. Indeed he contends (II. 123) that the doctrine of metempsychosis was borrowed from Egypt. He says that the Egyptians were the first to adopt the doctrine that on death the soul, which is immortal, passes into another animal body, and after passing through all forms of land, air and sea, again returns to the human body after 3000 years. He says that some Greeks held this view before and during his time as if it was their own. The Egyptians did not in actual fact have this belief attributed to them by Herodotus, but there was a belief that the dead could change himself into a heron, a swallow, a snake, a crocodile, or any other form, if he were found to be a just man at the Judgment of the Dead, and if he could pronounce the right spells.[190] If Plato is right in holding that the Orphics already believed in transmigration (*Phaed.* 62B), then it is very likely that they borrowed the

[187] See Fragmenta in Clemens Alexandrinus: *Stromata*, I, p. 304. It is notable that in Democritus, where an influence is possible, none is apparent. In his atomism there is no close resemblance to the so-called atomism of the Vaiśeṣika system. (G. P. Conger: "Did India influence early Greek philosophies?" in *Philosophy East and West*, II, 1952, p. 123.)

[188] A. B. Keith: in *Journal of the Royal Asiatic Society*, 1909, p. 569f.

[189] E. Zeller: *Presocratic Philosophy*, I, p. 327f.

[190] Wiedemann: *Realms of the Egyptian Dead*, p. 56.

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idea from Egypt,[191] and Pythagoras ennobled it by adding such features as the possibility of remembering the past existence in the new body.[192] Empedocles, whose views were somewhat different from those of Pythagoras,[193] says the only joy from this life of sorrow is in release from transmigration. This is directly contrary to the Upanishads, where no amount of right action or good deeds can free the soul from the eternal round of existence. In fact the purely rational attitude of the Greeks enabled them to anticipate Indian ideas. Empedocles follows up his belief that souls migrate from one body to another by claiming a kinship between all creatures, and concludes that it is a sin to slaughter them.[194] This is the Indian doctrine of *ahiṁsā*, but it did not even exist there until after the Buddha who died in 483 B.C.[195]

Apart from transmigration, a strong case was once made out for many of the contacts between the ideas of Pythagoras and India,[196] including mathematical ideas and the doctrine of the 5 elements, but these were well dealt with by Keith in the study already mentioned and to it the reader is referred. From a more positive standpoint we may note that comparative analysis has led one Indian scholar to the conclusion that Indian Logic owes a heavy debt to Greece. According to this view the definition of the most important logical terms, and the explanation of the various structures of the syllogism in the Nyāya-sūtra are borrowed from the Prior Analytics of Aristotle (384–322 B.C.). The author of the Indian work, Akṣapāda, is reported to have resided near Broach in Kathiawar on the sea coast, and it is suggested that Aristotelian logic reached him from Alexandria where the Greek philosopher's works were preserved in the Library through the efforts of Callimachus.[197]

The earliest alleged encounter between Greek and Indian philosophers occurs in a report by the musician Aristoxenus, who

[191] As they borrowed the cosmology of the world egg (cf. T. Gomperz : *Greek Thinkers*, 1901, I, p. 92f.)

[192] Rohde : *Psyche*, p. 454. n. 2.

[193] *Ibid.*, p. 473f.

[194] J. Burnett : *Early Greek Philosophy*, 4th ed., 1930, p. 250 and p. 93.

[195] Hopkins in *Journal of the American Oriental Society*, XIII, p. 119f, and XXVII, p. 455f.

[196] L. Von Schroeder : *Pythagoras und die Inder*, 1884.

[197] S. C. Vidyabhusana : "Influence of Aristotle on the development of the Syllogism in Indian Logic," in *J.R.A.S*, 1918, pp. 469–88.

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flourished 320–300 B.C., which was preserved by Eusebius (c. 315 A.D.).[198] According to this an Indian philosopher interviewed Socrates in Athens, and contended with him that philosophy should not enquire into human affairs if it were ignorant of divine. If this meeting actually did take place, it would be before 399 B.C., the date of the death of Socrates. We have already observed some specific medical correspondences between Plato, the pupil of Socrates, and Indian ideas, and here we must refer to another in the realm of symbolism. In his *Timaeus* of c. 350 B.C. Plato establishes a relationship between the elements of nature and geometric forms, and gives to the earth the shape of a cube, to fire the shape of a triangular pyramid, to air that of an octahedron, to water that of a 20-sided figure (icosahedral). It has been observed that the Tantric texts of much later date represent the elements by analogous geometric but two-dimensional figures — the earth by a square, fire by a triangle, air by a 6-pointed figure, water by a crescent shape and ether by a circle.[199] A borrowing from the Greek prototype is clearly a possibility. At least we know that an Indian king wished to learn Greek philosophy, and have already had occasion to refer to Bindusāra's lack of success in attaining this end.

The Greeks, too, once they had conquered the land, evinced an immediate curiosity in Indian philosophy. The sceptic Pyrrho (d. 275 B.C.) is said to have taken part in Alexander's expedition to India (Diog. Laert. IX. 63). Diogenes tells us that if Pyrrho sought solitude and strove toward rectitude it was because he had never forgotten the words of the Indian who reproached Anaxarchos for being unable to teach others virtue while he himself so persistently visited the palaces of kings.[200]

According to Plutarch (*Life of Alexander*, LXV), Alexander sent Onesikritos, a philosopher who belonged to the school of Diogenes the Cynic, to the Indian gymnosophists, Kalanos and Dandamis. Kalanos ordered the Greek to strip off his clothes and listen to him naked or he would not converse with him. When Dandamis was told about Socrates, Pythagoras and Diogenes, "he said they appeared to him to have been men of genius" but nevertheless

[198] *Praeparatio Evangelica*, XI, 3.
[199] Filliozat : *op. cit.*, p. 196.
[200] cf. V. Brochard : *Les sceptiques grecs*, pp. 74–5.

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criticized them for subjecting their lives too much to the requirements of their laws (as against following ascetic practices).[201] Taxiles persuaded Kalanos to visit Alexander, which he did, and warned Alexander by a concrete analogy that he "should control his empire from its centre, and not wander away to its distant extremities" if he was to avoid uprisings. Arrian (*Anab.* VII. i. 5-iii) reports that the Indian sages mocked Alexander for disturbing the peace of the world, and that king though he was, on his death he would have no more earth than would cover his bones. His invitation for one of them to come and live with him was spurned by a rejoinder from Dandamis who said he desired nothing it was in Alexander's power to give nor did he fear being dispossessed. However Megasthenes adds that Kalanos succumbed to the temptation and did go, but in Persia owing to ill-health he put an end to himself on the funeral pyre, presenting to Lysimachos, his pupil in philosophy, his horse.

Here we have sufficient evidence that Indian philosophers learned of Greek systems from Greek interpreters and that Greeks heeded the advice and even became pupils of Indian philosophers. Mandanes the Indian sage tells Onesikritos, "I commend the king, because though he governs so vast an empire, he is yet desirous of acquiring wisdom, for he is the only philosopher in arms that I ever saw." (Strabo. XV. 1. 64).[202] Alexander also put some riddles to the captive gymnosophists with the threat of execution should they be unable to answer.[203] There exist at least seven versions of this colloquy beginning with the most ancient which is a papyrus of c. 100 B.C. and followed by Plutarch (*V. Alex.* 64. 1f), Clement of Alexandria (*Strom.* VI. 4, 38, 2f), Pseudo-Callisthenes (III, 6, 1f), etc.[204]

[201] In one version of the Pseudo-Callisthenes *Romance of Alexander*, the Macedonian is made to ridicule Dindimus' asceticism. (Magoun : *The Jests of Alexander of Macedon*, 1929, p. 45.)

[202] Mandanes is now claimed to be merely a cloak for Megasthenes himself, and his account in this matter is held suspect. (T. S. Brown in *Journal of the American Oriental Society*, vol. 80, no. 2, 1960, p. 92.)

[203] Plutarch. LXIV. The questions as cited by Pseudo-Callisthenes are different. cf. A. Weigall : *Alexander the Great*, 1933, p. 303 ; and U. Wilcken : *Alexander der Grosse u. die indischen Gymnosophisten*, 1923.

[204] A.-J. Festugiére : "Trois rencontres entre la Gréce et l'Inde," in *Revue de l'histoire des Religions*, tom. 125–126, 1943, p. 34f.

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Later, in his Indian travels, c. 42 A.D., Apollonius of Tyana is also related by Philostratus to have paid a visit to the Indian philosophers, and actually searches for the Sophoi of Alexander, but his story is declared to be too fanciful to be genuine, though there are details in the description which are characteristically Indian.[205] Apollonius questions their chief Iarchus and learns that they held the opinions of Pythagoras. Iarchus gives him an account of his own deeds in his previous existence. He initiates Apollonius in astrology and divination, and defends the latter as a physician's art.[206] Apollonius stays for four months with the Sophoi, and then makes the 10 days journey by camel to the coast.[207]

Greek observers had unquestionably learned something of the position and custom of Indian sages as well as of their beliefs. Nearchus says of them that "the Brachmanes engage in public affairs and attend the kings as councillors; the rest are occupied in the study of nature — a class to which Kalanos belonged. Women study philosophy with them, and all lead an ascetic life." (Strabo. XV. 1. 66). Megasthenes also distinguishes between the two classes of philosophers — the more esteemed Brachmanes under guidance from birth, who live a simple abstemious life in a grove in front of the city, and the Sarmanes (from the Sanskrit *Śramaṇa*, "ascetic") who live in the woods and subsist on a natural diet. He speaks of the optimistic ideas of death held by the Brachmanes, for whom the discipline of life is but a preparation for death ; this in its turn is but a rebirth into a real and happy life. He explains the basis on which they regard good and bad to be both relative and illusory ; he knows of their belief (attested in the Ṛg Veda X., 129) that water was the generating principle of the world ; that this world placed in the centre of the Universe was spherical, and that God permeated all its parts. Of the Sarmanes he says one class are consulted by kings through messengers, and who worship the deity through them. The other class live by begging food and fortify themselves by adopting fixed and motionless attitudes. They effect

[205] J. Charpentier : *The Indian Travels of Apollonius of Tyana*, 1934, pp. 59, 61f.

[206] This recalls Strabo. XV.1.65 that the Indian sages employ themselves much on forecasting the future, rain, drought and diseases.

[207] O. de Priaulx : *The Indian Travels of Apollonius of Tyana*, 1873, pp. 22, 40, 50, 53.

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cures by regulating diets rather than by the use of medicines, though they can with their knowledge of pharmacy make marriages fruitful (Strabo. XV. 1. 59–60).

With the continually increasing knowledge of Indian philosophy after Megasthenes, it is quite rightly questioned whether neo-Platonic philosophy embodies Brāhminic ideas. The neo-Platonist strives by meditation to free his soul from the body, and to attain union with the Over-soul, which corresponds to the Hindu concept of emancipation (*mukti*). The *ekstasis* of Plotinus or the *haplôsis* ("the union with the deity") is averred to be the *pratibhā* or the *prātibham jñānam* of the Yoga system, i.e., "the immediate, universal knowledge of truth."[208] Others have argued that the final union of the soul (after its wanderings) with the One is essentially Platonic,[209] and that Plotinian pantheism is rooted in the traditions of Hellenic philosophy.[210] An idea of the doctrine of the Upaniṣads had been introduced in Rome by Hippolytus in his "Elenchos" before 234–35 A.D. He says that the Brāhmans on the Tagabena River taught that God was light and also *logos* (word or speech), the light that is perceived and the word that is known in the intellect. The Brāhmans had put off illusion and thus knew this light.[211] But this statement is regarded as being in too summary a form to have been the source for Plotinus (204–269 A.D.) who arrived in Rome in 245 A.D.[212] Porphyry (233–305 A.D.), in his "Life of Plotinus", claims that his master had already attempted to teach himself the doctrines of the Persians and Indians while he was in Alexandria.[213] As for Porphyry, he is held to be dependent on Sāṁkhya philosophy for

[208] R. Garbe: *The Philosophy of Ancient India*, 1897, p. 51.

[209] A. B. Keith: "Plotinus and Indian Thought," in *Indian Culture*, 2, 1936, p. 130.

[210] A. H. Armstrong: "Plotinus and India," in *Classical Quarterly*, 30, 1936, pp. 22–8.

[211] Hippolytus: *Philosophumena* I, C. 21, cited by J. Kennedy in *Journal of the Royal Asiatic Society*, 1917, pp. 484–5.

[212] J. Filliozat: *Les relations extérieures de l'Inde* (1) 1956. p. 51. St. Jerome (342–420) exhorts the virgin Lacta to imitate the Brahmin Indians and Egyptian Gymnosophists who live only on barley, rice and fruits (Epist. 129; cf. A. C. Perumalil "Christian writers on Early India," in *Journal of Bihar and Orissa Research Society*, XXVIII, 1942, Pt. 4, p. 347).

[213] E. Brehier: *Le philosophie de Plotin*, 1928, ch. V, "L'orientalisme de Plotin."

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the belief that the soul becomes omnipresent once liberated from matter.[214] It is in fact Porphyry who in his treatise "On Abstinence from Animal Food" (IV. 17–18), written c. 260 A.D., preserves for us one of the passages from the lost work of Bardesanes, the Babylonian, on the Indian gymnosophists. Based on the information imparted in 218 A.D. by Sandanes or Dandamis, an Indian who accompanied an embassy to Syria on the occasion of the enthronement of Elagabalus, the passage actually describes life in a (Buddhist) monastery. Incidentally, Clement of Alexandria (c. 190 A.D.) had already mentioned the Buddha by name, and says that the Indians have raised him to the rank of a god (*Strom.* I. 15 para. 72). He knows of the Buddhist stūpa, for he claims that the Brāhmans worship a pyramid under which the bones of some god are concealed (IV. 4. para. 17).

Another source bringing Indian philosophical knowledge to the West at this time was Mani. In 240 A.D. he says he crossed in a ship to the country of the Indians and preached to them the Hope of Life. He returned in 241 and became attached to the Court of Shapur I.[215] He must not only have taught the Indians but have learned from them since he freely admits that he has collected and joined to his doctrines "the scriptures, and the wisdom, and the apocalypses and the parables and the psalms of all the earlier churches." Evidence that the religion of Mani had early reached Egypt comes from the discovery in the ruins of a house in the Fayoum of a worm-eaten coffer with his works, two of which are a "capitulary" and a collection of letters by Mani himself, and five others which have also been restored have been compiled by his disciples.[216]

We will turn now to the question of the influence of Greek Literature on India. Our first task will be to enquire to what extent the Greek language was understood and employed by non-Greeks in the Hellenistic empire. Diodorus (XVII. 67. 1) says that Alexander arranged for Barsine and her sister to be taught Greek at Susa. With this in mind it must seem axiomatic that the Indo-Greek

[214] Garbe: *op. cit.*, p. 52.

[215] F. Cumont: in *Revue de l'histoire des Religions.* Mars-juin. 1933. p. 185.

[216] J. Przyluski: "Indian influence on Western Thought before and during the 3rd century A.D.," in *Journal of the Greater India Society*, January 1934, pp. 1–10, esp. p. 5.

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kings, if they married Indian princesses, would have followed the same pattern. Confirmation of the Babylonians learning Greek has come from tablets containing scrawling Greek transliterations of Babylonian words. These tablets have cuneiform on one side and Greek of the 2nd century B.C. on the other.[217] They give credence to Strabo's report (XVII. 6) that several native Babylonians such as Kidênas, Naburianos, Sudinos, and Seleucus, who were mathematicians and astronomers, were acquainted with the Greek language. Some Babylonians even wrote their own language in Greek letters, and priests made dedications in Greek.[218] Greek was similarly taught in Egypt; we have a fragmentary roll from the time of Philopater (221–204 B.C.) which is a school manual giving elementary notions of reading, mathematics and literature.[219] Some of the Arsacids of Persia and Armenia, such as Vardanes I, Artavasdes, and Orodes I spoke Greek fluently, and the Parthians generally used Greek as the diplomatic language in their dealings with the Romans.[220] Four Greek poems have actually been excavated from the Parthian period at Susa. Three of them are metrical epigrams of which one is dated 1–2 A.D., and the fourth is a lyric ode written by Herodorus, son of Artemon, a Seleucian on the Eulaeus, not later than the first century B.C.[221] Apart from inhabitants of pure Greek descent, the Greek language must have been cultivated by the half-castes who are attested in Seleucia, for example, by such names as Antipater the father of Anu-ahê-iddin, and Diocles son of Anu-uballiṭ-su.[222] It would not be too much to presuppose that there were such half-castes in the Indo-Greek kingdom, who would have been useful as dragomen and might have been to some extent instrumental in the transmission of ideas.

The first literary reference to the Greek script in India is by Patañjali (c. 150 B.C.) who calls it the *Yavanālipi* (Mahābhāṣya. IV. 1. 49), while the Mahāvastu (I. p. 135) also mentions Yāvanī

[217] T. G. Pinches: in *Proceedings of the Society of Biblical Archaeology*, XXIV, 1902, p. 108f, cf. pp. 120, 143.

[218] W. W. Tarn: in *Cambridge Ancient History*, IX, p. 720.

[219] M. I. Rostovtzeff: *Social and Economic History of the Hellenistic World*, 1941, III, p. 1589, n. 24.

[220] Dio Cassius and Herodian cited by G. Rawlinson: *The 6th Oriental Monarchy*, 1873, p. 411, n. 5.

[221] W. W. Tarn: *The Greeks in Bactria and India*, 1951, p. 39.

[222] Anz: *Ursprung des Gnostizismus*, p. 62, n. 1.

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among other scripts.[223] The ambassadors to Augustus from the Indian king Poros in 22 B.C. had with them a letter in Greek written on parchment according to Nicolaus Damascenus as preserved by Strabo (XV. 686, 719). As late as 44 A.D. we have the statement of Apollonius that Phraates the king of Taxila spoke to him in Greek, which would not be impossible if the latter was in fact the Parthian king Gondophares.[224] In India itself it is unlikely that the Indo-Greeks used their own language for administration. The inscriptions of the *meridarch* (divisional governor) Theodorus in the Swat valley and of Heliodorus at Vidiśā are both in the Prākṛt vernacular, though the script in the first case is Kharoshṭhī and in the second Brāhmī.[225] But the fact that Kaniṣka (whose date is a hopeless and unresolved tangle which is at present best left alone)[226] dispenses with the bilingual Greek and Prākṛt legends of his predecessors (Menander, Azes, Ranjubula, Kadphises II, etc.) and uses Greek only, may mean that he had a strong yearning for Greek culture. However the Greek on his coins is often ungrammatical, confounding as it does the nominative and the genitive. It has been observed that the same grammatical blunder is found in Seleucia on the coins of Gotarzes (41–51 A.D.) while the Greek on the coins of his rival Vardanes I (41–45 A.D.) is sometimes scarcely intelligible.[227] The cursive form of the Greek letters on Kaniṣka's coins seem to reflect the normal script for daily and commercial usage, but here again we have a parallel use of cursive script on the coins found at Susa and Shiraz of Orodes I and Phraates I in the 1st century B.C.[228] We cannot in the light of such slender evidence assess to what extent Greek was understood in Kaniṣka's kingdom. The inscription in Greek letters discovered in 1957 referring to the restoration of the temple of Surkh Kotal in Afghanistan is in a Bactrian language and has been attributed to Huvishka's reign.[229] There is also the problem of disparity in the

[223] B. N. Puri: *India in the time of Patañjali*, 1957, p. 162.

[224] cf. *Philostratus in honour of Apollonius of Tyana*, tr. J. S. Phillimore, 1912. [225] J. Marshall: *Taxila*, 1951, I, p. 41.

[226] For a recent summary see J. E. Van Lohuizen-de Leeuw: *The Scythian Period*, 1949, pp. 1–65.

[227] J. Kennedy: in *Journal of the Royal Asiatic Society*, 1912, p. 1014.

[228] *Ibid.*, 1913, pp. 122–3, 668. See also pp. 638–9, 922–3, 1014f.

[229] A. Maricq: in *Journal Asiatique*, 1958, p. 395; W. B. Henning in *Bulletin of the School of Oriental and African Studies*, 1960, pp. 47–55.

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knowledge of the Greek *language* and the Greek *script*. The knowledge of the latter lasted longer and persists even into the 5th century A.D. on Ephthalite coins.[230] The reference to a 25-letter alphabet in use in Tocharistan at the time of the visit of Hiuen Tsang in the 7th century A.D. must, it is thought, be a reference to the Greek script.[231] It is not therefore difficult to imagine how such a Greek word as *diadem* passed into Sogdian and later into Mongolian.[232]

Coming now to the influence of Greek literature in India we may observe first that the Sanskrit words for pen, ink, tablet, plaque, and book are all derived from the Greek — *kalama* from *kalamos*, *melā* from *melan*, *pitikā* from *pittakion*, *phalaka* from *plakos*, and *pustaka* from *puxion* (in Aristophanes), meaning tablet with writing.[233] The Greeks may have imported parchment into India, for it had been manufactured and exported in great quantities by Eumenes II from Pergamum in the early 2nd century B.C.[234] A Chinese author Ch'ien-han-shu c. 90 A.D. reports that the Parthians write on parchments.[235] But to our knowledge no parchment has yet been found in India, and in this connection we only have the word of Nicolaus of Damascus who mentions it (*diphthera*). The native writing materials were tree bark in the north and palm leaves in the south,[236] although Hiuen Tsang (iii. V. p. 148) refers to the Tāla leaf (Borassus flabelliformis) in general use in his time in India. Of the writing materials excavated at Taxila, the styli (*graphis stulos*) of bone and ivory from the Bhir Mound dated in the 3rd century B.C. are described as being of familiar classical type — with one end pointed for writing on the waxed tablet, and the other flat for smoothing the wax and erasing the writing.[237]

230 Whitehead : in *Journal of the Royal Asiatic Society*, 1933, p. 220. Tarn : *op. cit.*, p. 305.

231 F. W. Thomas : in *Journal of the Royal Asiatic Society*, 1924, p. 672.

232 B. Laufer : *Sino-Iranica*, p. 573.

233 G. d'Alveilla : *Ce que l'Inde doit a Grece*, 1897, p. 125.

234 Tarn : *op. cit.*, p. 373.

235 Hirth : *China and the Roman Orient*; and W. H. Schoff : *Parthian Stations*, 1914, p. 40.

236 Reinaud : *Memoire sur l'Inde*, p. 305. Al Beruni describes the *târi* leaf books of the South and the *tuz* bark tree books of Central and Northern India. (Al Beruni's India tr. E. C. Sachau. I, 1888, p. 171.)

237 J. Marshall : *Taxila*, 1951, I, p. 207, II, pp. 598, 660.

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The inkpots of Taxila of copper, bronze or earthenware are also claimed to be for the most part of western design,[238] while the copper pens found in the Saka-Parthian city of 1st century A.D. are held to be reproductions in metal of the reed pen, calamus, with the cut division of its point.[239]

The Indian practice of inscribing a record on several plates of copper joined by a ring may have been borrowed from the Romans. Examples of Roman decrees on two sheets of metal united by thongs and folded like a book have been found from the time of the Emperor Claudius in 34 A.D. up to the year of the Emperor Maximian in 300 A.D.[240]

One would at first be inclined to think that fables in a practically identical form are a commodity that are likely to be conceived in different areas quite independently. But while this may be generally true there are nevertheless special types, of a vivid impress but of a universal meaning, that are in fact transmitted. A case in point is the "Treasury of Rhampsinitus and the two thieves" recounted first by Herodotus (II. 121) as a piece of Egyptian history. Not only are there Persian and Indian versions[241] (the Jātakas, Rāmāyaṇa and Somadeva) but 19 variants of the same story in 14 different languages from the 5th century B.C. to the 19th century A.D.[242] And do we not have the repeated transmission of a whole cycle of stories such as the Ahikar Legend and the Alexander Romance ? (It has been demonstrated incidentally that the Ahikar story was transmitted from Mesopotamia to India through Sassanid Persia.[243]) The Kalila Dimna cycle follows this same pattern at a rather later date. Animal tales appear in the life story of the Buddha before the Christian era, and by about 300 A.D. are collected into a Sanskrit group. From this a Pahlavi translation appears c. 570 A.D., and Abdullah al-Mukaffa renders it into Arabic c. 750 A.D. The English version of the animal stories that appears in 1570 is thus based on "an Italian adaptation of a Spanish translation of a Latin

[238] *Ibid.*, I, p. 207. [239] *Ibid.*, II, p. 598.

[240] V. A. Smith : "Graeco-Roman influence on the civilization of Ancient India," 2nd paper in *JASB*, 1892, p. 54.

[241] See Nöldeke : in *Hermes*, XXIX, p. 155 ; XXVIII, p. 465.

[242] G. Paris : in *Revue de l'Histoire des Religions*, vol. 55, 1907, pp. 151f, 267f.

[243] A. H. Krappe : in *Journal of the American Oriental Society*, vol. 61, 1941, pp. 280, 284.

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version of a Hebrew translation of an Arabic adaptation of the Pahlavi version of the Indian original."[244] Similarly the Barlaam and Josaphat story composed in the 6th century A.D. by a Christian on the basis of the Buddha legend, possibly through the Lalita-Vistara, was translated from the Pahlavi into Arabic and Syriac, thence into Gregorian and Greek, and later still into Hebrew, Ethiopian, Armenian, Russian, Rumanian and other European languages.[245]

Having established that the principle of diffusion was operative in the case of both individual and groups of fables, it nevertheless remains difficult to decide, especially in the context of India and Greece, which ones were borrowings and which ones autochthonous. At any rate it is best not to eliminate the possibility of cross-fertilization. In the animal tales the following have been singled out as having a striking resemblance :[246] the ass in a lion's skin (in Aesop's fable the wind blows away the lion's skin in which the ass is disguised ; in the more logical and therefore possibly earlier Jātaka (no. 189) the ass disguised in a lion's skin is betrayed by its own cry); the eagle who dropped the tortoise known to Democritus (460–351 B.C.) is in the Jātaka the swan who dropped the tortoise.[247] While others include the sick lion, the dog who leaves his prey for the shade, the hen who laid golden eggs, the metamorphosed mouse, the frogs who demanded a king, the lion freed by mice, the poisoned bowl of milk, the traveller who revives a serpent in his bosom, etc.[248] Always allowing for the possibility that a fable may have remained in an oral form and only been committed to writing at a late date, we are yet compelled to observe that for the majority of the literary form of these fables the chronological

[244] *Pañçatantra*, ed. F. Edgerton ; and J. Jacobs : *The Earliest English Version of the Fables of Bidpai*, 1888, pp. XI–XII, and XXV.

[245] E. Kuhn : "Barlaam und Joaseph . . ." in *Aband. der Bayerischen Akad. der Wissen. Phil. klasse*, Munich, 1897.

[246] A. Wagener : "Rapports entre les apologues de l'Inde et les apologues de la Grèce," 1852, *Académie royale de Belgique*. Mémoires Couronnés, t. XXV, Brussels, 1854.

[247] This Indian story reflects Indian conditions. The tortoise is attempting to climb out of a drying lake.

[248] Other stories whose wide diffusion has been traced include the sworn enmity between cat and mouse and the story of the three fishes (T. Benfey : *Pantschatantra*, I, pp. 243f, 545f.).

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precedence is with Greece.[249] Thus the fable of the fox and the raven is attested in Greece on a Corinthian vase of the 6th century B.C. while the story of the fox and the crow in the Jātakas can be by no means so early. The story of the goat that swallowed a razor in the Jātakas is already a Greek proverb, and the mice which eat iron in the same source are known to Seneca and Herondas. Where we can be sure that an Aesopic fable goes back to the collection made by Demetrius of Phalerum, founder of the Library of Alexandria c. 300 B.C., from oral sources (Diog. Laert. V. 80), we can be confident of an early source for the Greek versions, but with Phaedrus (a Greek freedman of Augustus) a different situation prevails, for he compiled fables not only from Aesop but from Anacharsis the Scythian (c. 30 A.D.).[250] Phaedrus' tales have further Indian parallels including that of the ungrateful snake which bit its rescuer, the motif of the bald-headed man and the fly, etc.[251] Another story in the Jātakas known in the West at a comparatively late date through Pausanias (X. 33. 9) (before 180 A.D.) is that of the Brāhmin killing the very ichneumon who had saved a child from a snake : in the western version the snake is condemned as the child's murderer though it had in fact saved him.[252]

We must also take into account the possibility that some of the beast fables originated in a land intermediate between Greece and India. That beast fables were known in Sumer in the 3rd millennium B.C. is evident from the engraved shell plaques on the lyre found in King Abargi's tomb at the Royal Cemetery of Ur.[253] Of the three episodes portrayed we may single out two because of the enormous longevity of the motifs. The serving-lion who stands erect on his hind legs and brings an amphora is found in much the same fashion on a bronze crater handle from Cyprus,[254] and must belong to the tradition of the animal servants of Minoan Crete.[255] The other theme on the Sumerian shell plaque of an ass playing a lyre becomes

[249] A. B. Keith : *A History of Sanskrit Literature*, 1928, p. 354, cites the examples that follow.

[250] J. Jacobs : *The Fables of Aesop*, 1926, p. XVI.

[251] A. B. Keith : *op. cit.*, p. 355.

[252] *Ibid.*, p. 354 and W. R. Halliday : *Indo-European Folktales and Greek Legend*, 1933, p. 44.

[253] L. Woolley : *Excavations at Ur*, 1954, Pl. 11.

[254] E. Babelon : *Manual of Oriental Antiquities*, 1906, Fig. 235.

[255] M. P. Nilsson : *The Minoan-Mycenaean Religion*, 1950, pp. 146–8, 377.

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a favourite one in the Romanesque churches of France in the 12th century A.D.[256] The bridge between the Sumerian example and the Romanesque is Boethius who in his Consolation of Philosophy (I. 8) has the ass playing the lyre as a satirical comment on a fable. In the orthostats of the 9th century B.C. palace of Tell Halaf it is the lion who plays the lyre and the donkey dances,[257] but further intermediate steps which no doubt existed are lost. Indeed very few beast fables have survived in the literary tablets of ancient Mesopotamia. We may briefly mention the story of the eagle and the serpent in the Etana legend ; there is also the story of the fox who got the dog into trouble, while there is one genuine apologue in the fable of the horse and ox.[258] Tales of animal caricature existed in Egypt too between 1580–1150 B.C. and were illustrated.[259] Late examples of these survived in Demotic.[260]

Of the older strata of non-animal Greek stories with Indian parallels we have two recounted by Herodotus. The first (Vl. 129) is the story of Hippocleides who danced away his bride, which is identical with Jātaka 32, in which by its impudent dance the peacock forfeits his bride. Against the theory that the story was introduced into India by the Bactrian Greeks,[261] it is argued that "it is more feasible for a fable to be transferred to human conditions, than for a fable to be made out of an anecdote."[262] The other is the tale of Intaphernes' wife which Herodotus (III. 119) tells as a Persian story. (We now know from Darius' Bisitun Inscription that Intaphernes was the general sent with an army to Babylon.[263]) Its theme, that husbands can be replaced but not brothers, is found not only in the Jātakas (no. 67) but also in the Rāmāyaṇa Epic. Here again

[256] E. Male : *L'Art Religieux du XIIe siecle*, p. 380 ; E. Brehier : *L'art Chretien son developpment iconographie*, p. 211 ; C. Martin : *L'Art Roman en France*, 1910, Pl. IX ; and R. Rey : *L'Art Roman*, Pl. XCII.

[257] M. von Oppenheim : *Tell Halaf*, 1933, Pl. XXXVIII.

[258] C. Johnston : "Assyrian and Babylonian beast fables," in *American Journal of Semitic Languages*, XXVIII, 1912, p. 81f.

[259] C. R. Williams : in *Bulletin of the New York Historical Society*, 1921, pp. 91–9.

[260] Spiegelberg : in *Orientalistiche Literataurzeitung*, 1916, 19, Col. 225–8, Taf 4.

[261] C. H. Tawney : in *Journal of Philology*, XII, 1883, p. 121.

[262] M. Winternitz : *A History of Indian Literature*, II, 1933, p. 127, n. 5.

[263] R. G. Kent : *Old Persian*, 1930, p. 128.

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there is no unanimity and some favour a Greek,[264] and others a Persian, origin for the tale.[265]

Among the Greek stories taken to India one suggested is the myth of Polyphemus,[266] and others include the myths of Psyche, Icarus, Pygmalion, Orpheus and Euridice, etc.[267] Another story known in India is recounted by the Scholiast of Apollonius of Rhodes after the historian Dieuchidas of Megara. In this the dragon slayer shows up his impostor by producing the tongue of the monster while his rival only has the head.[268] The pointed judgment against a courtesan attributed by Plutarch to Demetrius of Phalerum and by Aelian to Amasis, is also known in India, where again we find the celebrated case of "the shadow of the ass," already proverbial in Greece in the time of Demosthenes.[269] Finally in the Commentary on the story of Buddha by Buddhaghoṣa (c. 420 A.D.), where there is incidentally found the Aesopic fable of the flight of the tortoise through the air,[270] we encounter a parallel which could scarcely be regarded as fortuitous. Buddha consoles a mother bereaved of her son by asking her to bring a mustard seed to restore the son "from a house in which neither a son, a father, or a slave had died." The parallel occurs in the 13th epistle of Emperor Julian (d. 363 A.D.) where he relates that Democritus of Abdera promised Darius to restore the life of his dead spouse if he should succeed in finding three names of persons who had not yet been called to mourn.[271]

A story for which a common origin has been proposed is the theme of the appropriating of the water of life in the Greek Glaucos Saga, and the stealing of the soma plant in the Gandharva Saga.[272] The only common source that appears likely is the stealing of the plant of life by the serpent in the Babylonian Gilgamesh Legend.

[264] C. H. Tawney: in *Indian Antiquary*, X, 1881, p. 376f.
[265] T. Noeldeke: in *Hermes*, vol. 29, 1894, p. 155f.
[266] Companetti: in *Revue Critique*, 1867, I, p. 186.
[267] A. Weber: "Die Griechen in Indien," in *Sitzungsberichte der Königlich Preussichen Akademie der Wissenschaften*, 1890, pp. 917–19.
[268] G. Paris: *op. cit.*, p. 298.
[269] Benfey: *Pantschatantra*, I, p. 127.
[270] *Fausböll*, ed., p. 419.
[271] A. Weber: in *Indian Antiquary*, I, 1872, p. 174. n.
[272] L. D. Barnett: in *Bulletin of the School of Oriental Studies*, IV, 1926–28, pp. 715–6.

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As for the actual transmitters of stories a number of types may be imagined — merchants, sailors, foreign invaders and settlers, and not the least of all imported slave girls. We first hear of Indian girls imported to Egypt by Ptolemy II, a fact to which we have already had occasion to refer. Then by the end of the 2nd century B.C. we hear of singing or "flute girls" shipped by Eudoxus in his attempted voyage to India round the Cape (Strabo. II. 99, citing Poseidonius). Then comes the statement of the Periplus (para. 49) in the 1st century A.D. that the king could buy foreign women at Barygaza (Broach) and it is presumably these whom Bhāsa (in the third century ?) mentions in his plays,[273] and later in the 5th century A.D. in the plays of Kālidāsa the king (Duṣyanta Rāja) appears accompanied by Yavana women.[274] The Mālava king Samudragupta c. 345 A.D. says he received presents including some Yavanī girls from Daivaputra Shahi-Shahanushahi (the Kushan King of Kings).[275] Through them Indian writers at the courts of kings might have learned Greek romantic stories such as that of Pygmalion, which is reflected in Vāsavdattā of Subandhu who describes the bringing to life of a stone statue by an embrace.

Another possibility is that some learned Indians were acquainted either directly with Greek books or through translations. In the works of Bāna there is a formal allusion to a book written by Yavana (Yavana-prokta-Purāṇa).[276] For translations we have to rely on the statements of western writers. There is the well-known contention of Dio Chrysostom (d. 117 A.D.) (*Orationes*. LIII. 6) that the memory of Homer lived not only among Greeks but also among barbarians, "for his poems it is said are sung by the Indians who have translated them into their own language." Dio's contemporary Plutarch toward the end of the 1st century A.D. claims (*Mor*. 328 D) that by Alexander's means Asia was civilized and Homer read there. Finally another writer, Aelian (170–235 A.D.) (*V. H*. XII. 48), says cautiously, "if one may credit those who write on these matters," not only the Indians but the kings of Persia also have

[273] A. B. Keith : *Sanskrit Drama*, 1924, p. 61, n. 2.
[274] A. Weber : "Die Griechen in Indien," *op. cit.*, p. 910.
[275] Allahabad Pillar Inscription. See Fleet in *Corpus Inscriptionum Indicarum*, III, p. 14.
[276] Sylvain Lévi : *Quid de Graecis veterum Indorum monumenta Tradiderini*, p. 55.

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translated and sung the poems of Homer. Some have argued in favour of an actual Indian translation of Homer on the basis of these reports,[277] while others have suggested that the references must have been to the Mahābhārata, with which a familiarity is shown by Ptolemy and Dionysius, who know the Pāṇḍava-Pāṇḍus who occur in the Epic but not in contemporary history.[278] But Dio actually specifies certain Homeric characters known to the Indians. Whatever may be the basis of all these reports there is clearly a strong probability that the Greeks of Bactria and India continued to sing the Epics of Homer. Of the Greek literary papyri excavated in Egypt by far the largest number was passages from Homer. To be exact some years ago one could count 315 MSS. of Homer (including 202 of the *Iliad*, 57 of the *Odyssey*, 21 Dictionaries etc.) as compared with 51 of Demosthenes, 32 of Euripides, 26 of Menander, 25 of Plato, 12 each of Sophocles and Herodotus, etc.[279] Little as we know of the cultural life in the courts of the Indo-Greek kings we must not imagine it to have been non-existent. The Milinda Panha (I. 9) tells us that King Menander knew systems of philosophy, arithmetic, music, medicine, Indian religious texts, astronomy, magic, causation and spells, the art of war, poetry, conveyancing — in a word all the 19 arts and sciences. Can we for one moment imagine that Menander had lost all touch with his Greek culture, and that the poetry and music that he knew were purely Indian ? On the contrary, from the analogy of the practice of Greek settlers in Egypt we could quite confidently state that in Menander's court, where Greeks must have mingled with the Indians in closest harmony, Homer was indeed the prime bard.

Taking all this into account, and the fact that the Rāmāyaṇa can by no stretch of imagination be held to originate before the Greek advent into India, we have no hesitation in joining the ranks of those who long ago held that some important themes of the Homeric Epic have found their way into their Indian counterpart. The main themes of the *Iliad*, the abduction of Helen across the sea and the siege of Troy, are reflected in the stealing of Sītā and the war at Laṅkā, which also lay across the sea. The story has

[277] Jacobi : in *Festschrift Wackernagel*, p. 129f.

[278] R. Pischel : *Die Indische Literatur*, 1906, p. 195, and Tarn : *op. cit.*, p. 381.

[279] C. H. Oldfather : *The Greek Literary Texts from Graeco-Roman Egypt*, 1923, p. 67.

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been so entirely transmuted by Indian predispositions and ideas, that it is possible to take shelter in the view that the similarity is only of the remotest kind.[280] However, it will be noticed in the Rāmāyaṇa (IV. 58f), at the very place where Sampāti tells how he had seen Rāvaṇa stealing Sītā away and taking her to Laṅkā, and how he had wished once to fly to the sun and got his wings scorched — an account which could only have been modelled on the Greek tale of Icarus. (Ovid : *Met.* VIII. 195 ; Hygin : *Fab.* 40). From the *Odyssey* again some salient themes are incorporated into Indian literature. In the Rāmāyaṇa (I. 66, 67) King Janaka proclaims that his daughter Sītā should be the prize of the man who should show the greatest prowess by bending an enormous bow which none of her previous suitors had been able to bend. Janaka conquered and drove out the suitors.[281] If there is any doubt here that the source for the story is the *Odyssey* (XXII) with Penelope's promise to marry the suitor who could draw the bow, and the subsequent slaying of the suitor by the hero, then we have to turn to the Janaka Jātaka for a further Homeric element in conjunction with the one already mentioned. Here we have the story of one who is ship-wrecked being rescued by a sea goddess, which is none other than the corresponding story of the rescue of Odysseus by Leukothea (cf. *Od.* V. 336). The sequel of the Jātaka story is that by bending an enormous bow the rescued man of prowess marries the queen of the country.[282] Another complete sequence of passages from the *Odyssey* occurs in the Pali text of Ceylon the Mahāvaṁśa (cap. VII. Turnour ed. p. 48).[283] Vijaya lands on the island of Laṅkā (Ceylon) and the tutelary deity provides him with a counter-charm against enchantment, just as Odysseus (X. 277, 287) lands on the western island of Aeaea and Hermes instructs him how to resist enchant-ment. Vijaya saw the anchoress seated spinning (cf. *Od.* X. 220)

[280] e.g. K. T. Telang : *Was the Rāmāyaṇa copied from Homer* ? 1873, p. 9f, unnecessarily points out that Paris was effeminate while Rāma was a conqueror of the world, that Helen was a coquette while Sita was as pure as heaven.

[281] cf. also similar story in Mahābhārata, I, 6955f. As a folk motif the suitor contest in which shooting the bow is the challenge, is certainly wide-spread, but the theme of bending the bow (specifically in the absence of the woman's husband) is found only in Greece and in Japan. (Stith-Thompson: *Motif-Index of Folk Literature*, 1956, III, p. 402, no. H. 331.4.2.)

[282] A. Weber in *Indian Antiquary*, I, 1872, p. 175, and in *Indische Studien*, XIII, pp. 336f, 480f.

[283] *Ibid.*, I, 1872, p. 173 n.

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and was spellbound, but because of his charm she could not devour him. She cast him "bellowing loudly" (cf. *Od.* X. 241) into an underground cave. (Circe desired Odysseus to descend into Hades. *Od.* X. 135). Vijaya saw she was a Yakkhini (enchantress), bent his bow, caught her neck in a noose, seized her hair with the left hand and drew his sword with the right (cf. *Od.* X. 294, 321). He made her swear an oath (*Od.* X. 299, 343). She restored to him his attendants, and because she saw they were exhausted (cf. *Od.* X. 463) she gave them food. She transformed herself into a maiden of 16, and Vijaya spent the night with her. (cf. *Od* X. 347). Such detailed and sustained parallels can only mean one thing — the adventure of Odysseus on the island of Circe was transposed into Indian terms. And again the female Yakkinīs in the Valāhassa Jātaka (no. 196), who lure the shipwrecked men and delight them with their love in order to kill or devour them later, are none other than sirens and beings like Circe and Calypso.[284] We shall see presently that the wooden horse of the *Odyssey* (IV. 280 ; VIII. 494 ; XI. 525) likewise found its way into Indian literature. In view of all these Homeric elements it would certainly be unwise, as has now become the practice, to scorn the western sources which claim a knowledge of their great bard in the far-off land of India. It must not be forgotten that the Indian epic Mahābhārata (II 14, 15) itself establishes a close, cordial relationship with Greek rulers when it refers to the ruler of the Yavanas, Bhagadatta, as the friend of the epic hero's father. This personage is suggested to have been Apollodotus, founder of the Graeco-Indian kingdom (c. 160 B.C.).[285]

Is it beyond the realm of possibility that the battles of the Indian epics were stimulated by the example of Homer's *Iliad*? For there to be the slightest chance of this being true we must establish that the epic was composed in proximity to the Graeco-Bactrian kingdom, that is in the north-west corner of India. There is evidence for this in fact : Janamejaya heard from Vaiśampāyana the famous

[284] M. Winternitz : *A history of Indian Literature*, 1932, II, p. 131

[285] A. Weber : *Ind. Lit.*, p. 204f ; L. von Schroeder : *Indiens Literatur und Cultur*, p. 463f ; and E. W. Hopkins : *The Great Epic of India*, 1902, p. 394.n.1. In the Mahābhārata (II. 578) Bhagadatta is called King of the Yavanas, and in II. 1834 he is accompanied by Yavanas. If the Seleucids and Ptolemys had adopted elephants of war there is nothing surprising in the Mahābhārata (V. 5804) describing Bhagadatta as fighting on elephants and being supremely skilled in handling them.

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story of the Kurus and Pāṇḍus at Takshaśilā (Mahābhārata XVIII. 5. 30–4), and the earliest reference to the Mahābhārata is found in the Aṣṭādhyāyī of Pāṇini, a native of Śalātura, not far from Taxila.[286] It is a measure of the Indian genius that if the basic idea came from an external source (which we may again say is only just barely possible) the working out of it in outline and in detail was totally different, and the stories told in it were almost exclusively derived from native sources.

Excavation and chance discovery have come to our aid in establishing that the story of the Trojan horse was known in north-west India. A stone relief portraying the Trojan horse was excavated in the Peshawar plain. The Horse mounted on wheels is being pushed forward (by Sinon ?). Laocoon dressed in Roman fashion is thrusting his spear into the Horse as described by Vergil (*Aeneid*, II, 50–53). On the left Cassandra, depicted in Indian fashion, rushes out in dismay uttering a warning. As compared with this in the Capitoline *Tabula Iliaca* of the first century A.D., Cassandra, again holding up her hands in horror, is being restrained as she rushes out to interfere with the procession bringing in the Horse. The detail of the Horse having wheels in the Indian rendering suggest a date of the 2nd century A.D.[287] In the Pali prose commentary on the Dhammapada (c. 420 A.D.) the Trojan horse has been naturalized and transformed into an elephant. The ruler of Ujjain has a huge wooden elephant made, and places it in the forest filled with armed men. When Udayana king of the Vatsas came near to charm it with his vīṇā, the sides opened, and the warriors leaped out and seized the prince.[288] The story recurs in the *Kathā-Sarit-Sāgara* of Somadeva (1063–1081 A.D.). Caṇḍamahāsena is described as capturing the king of Vatsa by means of warriors concealed in an artificial elephant.[289] The events leading up to this in both versions are practically identical. Udayana is given a divine flute called Ghoṣavatī in gratitude for freeing a captive serpent king. The flute has the quality of being able to charm the fiercest of creatures. Somadeva says the lute had many strings divided according to quarter tones. It was as Udayana wandered about the forest

[286] H. C. Raychaudhuri : *Studies in Indian Antiquities*, 1932, p. 24.
[287] J. Allan : in *Journal of Hellenic Studies*, LXVI, 1946, pp. 21–23.
[288] *Fausböll*, ed. p. 158 ; Rogers : *Buddhaghosa's Parables*, p. 39.
[289] N. M. Penzer : *The Ocean of Story*, I, 1924, pp. 100, 122f.

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capturing wild elephants that Mahāsena struck upon the device of the artificial elephant with the hope that once within his power he could induce Udayana to marry his daughter Vāsavadattā.

It is believed that the story of Udayana was first recounted in the lost Bṛhatkathā of Guṇāḍhya, a semi-mythical poet of the 2nd century B.C.[290] But the earliest extant version of it is in the plays of the dramatist Bhāsa whose date may be about the 3rd century A.D. In his play "Yaugandharāyaṇa's Vow" is to be encountered the artificial elephant episode, and in his "Dream Queen" the sequel of his marriage to Vāsavadattā.[291] Despite the fact that in a 20th dynasty Egyptian papyrus[292] we find a variant of the Trojan horse episode, the armed men being introduced into a city (Joppa) hidden in jars, we ourselves do not entertain any doubt of an Indian borrowing from Greek myth. This is made all the more probable by the recognition that the basic form of the Indian story seems to be founded on Euripides' play "Alcestis,"[293] acted first in 438 B.C. Admetus resembles Udayana not in being a king of a wild forest realm and being a tamer of animals, but more particularly in having a musical charm given him by Apollo for a favour conferred. With this lyre Admetus tames and harnesses a lion and a wild boar to his chariot, a task which enables him to win the hand of Alcestis. True, Vāsavadattā does not die for her husband as does Alcestis,[294] but she sacrifices everything for him, even suffering to live in separation and disguise, and in this last respect again there is a marked parallel in motif in the discovery of the identity of the veiled lady, Padmāvatī, in the one case and Alcestis in the other. It might be thought that the idea of luring the elephant with music was not borrowed from the Apollo myth but arose out of a prevailing indigenous practice. Indeed Strabo (XV. 1. 41–43) does say that Indian elephant trainers teach the newly caught elephants to be obedient by soothing them, some by coaxing words, and others by songs and the music of the drum. Aelian also says

[290] A. B. Keith : *The Saṇskrit Drama*, 1924, p. 102.

[291] See A. S. P. Ayyar : *Two Plays of Bhāsa*, Madras, 1941.

[292] Maspero : *Stories of Ancient Egypt*, pp. 108–144.

[293] A. G. Shirreff : "Bhasa in the Udayana Story," in *Art and Letters*, XXXIII, no. 2, 1960, pp. 33–5.

[294] Euripides himself has borrowed the theme of the wife's sacrifice from an old folk tale. (See G. Megas : in *Archiv fur Religionswissenschaft*, XXX, 1933, p. 1f.)

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(*Hist. Anim.* XII. 44) that in pacifying the newly caught angry elephant Indians sing to it in their native melodies, and soothe it with the music of an instrument in common use which has four strings and is called a *skindapsos*. These statements are evidently based on the eye-witness accounts of Megasthenes,[295] and should therefore be treated with respect. We are compelled, however, to point out that in the oldest Sanskrit treatise on elephant training there is no such method described. But there is among the five methods of elephant capture in the Mātaṅga-līlā (ch. X)[296] one which involves driving and pursuing them by the fearful sounds of kettle drums and musical instruments. We are not in a position to verify from native sources that the system described by Megasthenes was actually in use in Mauryan India, and indeed we are hard put to it to identify the instrument, the *skindapsos*. Patañjali attests the use of the seven stringed *vīṇā* (Mahābhāṣya II. 2. 34) in the 2nd century B.C. The traditional number of strings in a Greek lyre was incidentally also seven. The seven stringed *saptatantrī vīṇā* mentioned in the Mahābhārata (III. 134. 14) is held to be the Greek *heptatonos phorminx*.[297] In conclusion it seems to us that Udayana's lute has no connection with a real practice. Its unique magical quality, and its legendary treatment in different stories in the Udayana cycle in Buddhist lore,[298] both suggest for it a mythical origin, one to which the Phoenician story of Cadmus luring out Typhon from his grotto by playing the flute (Nonnus: *Dionysiac* I. v. 520) also belongs.

As in the case of Homer we have the statement of Western writers that Euripides was known in the East. According to Philostratus, Apollonius of Tyana met the king of Taxila, Phraates, who spoke to him in Greek and said he had read Euripides' Herakleidai.[299] We have already suggested that there might be substance in this contention provided this king of Taxila was of Parthian extraction. In Iran the Parthians did act Greek plays. Plutarch

[295] cf. J. W. McCrindle: *Ancient India as described by Megasthenes and Arrian*, 1926, pp. 91, 93.
[296] F. Edgerton: *The Elephant-lore of the Hindus*, 1931, pp. 16f, 90.
[297] E. W. Hopkins: *The Great Epic of India*, 1902, p. 365.
[298] E. W. Burlingame: *Buddhist Legends*, 1921, Pt. I, pp. 248 (3-stringed vīṇā), 270, 285.
[299] cf. J. Charpentier: *The Indian travels of Apollonius of Tyana*, pp. 53–5.

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(*Crassus* para. 32) informs us that the Parthian king Orodes I had Euripides' *Bacchae* acted before him after the battle of Carrhae against the Romans in 53 B.C. Plutarch also says elsewhere (*De Alex. Fort.* I, 328D) that the Gedrosians performed the tragedies of Sophocles and Euripides. It would seem quite astonishing to find classical drama in Baluchistan, but it is believed that Plutarch is referring to the city of Alexandria in Makarene in Graeco-Bactrian times.[300] That Sophocles was acted in India, or at least the theme of one of his plays known, is attested by a fragment of a vase of local manufacture found near Peshawar. A scene from his play the "Antigone" represents Haemon begging Creon for his beloved Antigone's life.[301]

Alexander had set the precedent of introducing Greek actors and musicians into various parts of his Empire. On his entry into Memphis in Egypt he held a gymnastic and musical competition to which the most famous artistes from Greece were summoned.[302] Then again on the occasion of the mass marriages of himself and his troops to Persian brides in 324 in the palace grounds at Susa, he held five days of festivity during which the guests were entertained by Greece's most famous actors, musicians, singers, poets and conjurors.[303] At the capitulation of Taxila Alexander held gymnastic and equestrian contests on the banks of the Indus (Arrian : *Anabasis*. Bk. 5. Ch. III), and again after passing through the Gedrosia desert in Karmania Alexander celebrated a musical and gymnastic concert according to Aristoboulos (*ibid.* Bk. 6. ch. XXVIII). It is only natural to expect that the Greek settlers in the various Alexander-cities in the east would continue these forms of entertainment. If we assume this, then we can understand the basis for Nearchus' remark that "the Indians quickly learnt to make Greek articles such as scrapers and oil flasks used by athletes."[304]

It is possible that in Bactria the Greeks built a theatre as they had in Babylon.[305] The letters of the inscription recording the

[300] W. W. Tarn : *Alexander the Great*, 1948, II, pp. 254–5.

[301] J. Marshall : in *Cambridge History of India*, I, 1935, p. 646.

[302] U. Wilcken : *Alexander the Great*, tr. G. C. Richards, 1932, p. 117.

[303] A. Weigall : *Alexander the Great*, 1933, p. 318. Their names are listed by Athenaeus XII. 54.

[304] E. R. Bevan : in *Cambridge History of India*, I, 1935, p. 418.

[305] R. Koldewey : *Das wieder erstehende Babylon*, 1925, pp. 293–9.

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construction of the brick theatre in Babylon point to a time not later than 150 B.C., and one suggestion is that it was connected with the effort of Antiochus IV to organize the hellenized population of their Oriental cities.[306] At any rate the theatre was rebuilt in the Parthian period and enlarged.[307] At Susa too there was a Greek gymnasium and stadium.[308] Since there is no evidence in Indian literature prior to the Greek advent of the performance of plays in specially built theatres, we should not, as Indian writers are wont to, reject the possibility that the idea of staged performance was introduced by the Greeks, much as were the smaller athletic items already mentioned. An open air theatre in the Sītābeṅgā caves is the earliest surviving vestige of it in India. An inscription whose form of letters prove it to date from the 2nd or 3rd century B.C. speaks of poetry at the Spring festival when frolics and music abound,[309] and we know from the prologues of Indian plays that they were usually performed on the occasion of a festival, particularly that of Spring.[310] The similarity of this cave to the Greek theatre is nominal and not very marked.[311] The playwright Kālidāsa in the 5th century A.D. refers to cave theatres,[312] and also mentions an auditorium (*Prekṣāgāra*) in a Nāṭyaśālā (theatre).[313] In the treatise, the Nāṭyaśāstra of Bharata (an author whose date is a matter of great uncertainty, though it is undoubtedly before the 3rd century A.D.),[314] again it is stated that the playhouse should be made like a mountain cavern. He stresses that it should be free from wind and have good acoustic quality.[315] He describes its

[306] M. I. Rostovtzeff : *Social and Economic History of the Hellenistic World*, 1941, II. p. 1049 ; III, p. 1586, n. 17.

[307] H. J. Lenzen : in *Sumer*, XV, 1959, nos. 1–2, p. 39.

[308] W. W. Tarn : *The Greeks in Bactria and India*, 1951, p. 17.

[309] T. Bloch : *Archaeological Survey of India. Annual Report*, 1903–04, p. 123f.

[310] E. J. Rapson : in *Encyclopaedia of Religion and Ethics*, IV, 1911, p. 885b.

[311] cf. Luders : "Indian caves as pleasure resorts," in *Indian Antiquary*, XXXIV, pp. 199–200. And S. Konow : *Indische Drama*, p. 41.

[312] *Kumāra-Sambhava* (1, 10, 14) and *Meghadūta* (1. 25).

[313] *Mālavikāgnimitra*, Act I.

[314] For various suggestions of the date of Bharata, commentators on, and a bibliography of the editions of his text see Sushil Kumar De : *Studies in the History of Sanskrit Poetics*, 1923, I, pp. 23–44.

[315] Nāṭyaśāstra ascribed to Bharata Muni. tr. Manmohan Ghosh. *Bibliotheca Indica*, Calcutta, 1954.

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arrangement and refers to a round (*Vikṛṣṭa*) type as well as square and triangular types.[316] The first of these inevitably recalls the sigma-shaped or semi-circular Greek theatre, while Bharata's further recommendation that the playhouse should have two floors on different levels is paralleled by the Greek wooden stage buildings having upper stories already in the 5th century B.C.[317] Incidentally in Greek tragedy and satyric drama the background often had representations in wood and canvas of a cliff with a central cave. In Indian drama the background of the stage was formed by a curtain which was actually called Yavanikā. The claim that this name showed the borrowing of a feature of the stage from Greece[318] has been disputed in favour of the suggestion that the reference is only to a fabric of Greek manufacture.[319] There is evidence for a linen backdrop in the early Greek theatre, while a substantial curtain for drawing across the front of the stage is established beyond doubt in the late Hellenistic and Roman theatres.[320] We ourself can see nothing in favour of the view that a special kind of Greek cloth was necessary in India as a backdrop (unless it implied painted stage scenery), and would prefer the older suggestion of a transmitted Greek stage device. Still, we have observed that in the Suppâraka-Bodhisat's voyages the merchants bought foreign curtains.[321]

There are indications even of Greek dramatic influence on Indian theory. Bharata in his Nāṭyaśāstra says that there should be five actors, which corresponds to the list of the regular male personnel in a Graeco-Roman play.[322] True, this does not extend to any extant Indian play, but this may either mean that there was a disparity between theory and practice, or that the foreign restriction was not amenable in its new environment. Some points of

[316] For conjectural reconstruction see Acharya: "The playhouse of the Hindu period," in *Modern Review*, Calcutta, 1936, pp. 370–8.

[317] A. W. Picard-Cambridge: *The Theatre of Dionysus in Athens*, 1946, p. 68.

[318] A. Weber: *Ind. Stud.*, 1868, XIII, p. 492.

[319] Sylvain Lévi: *Quid de Graecis*, p. 25, and S. Konow: *Das Indische Drama*, 1920, p. 5. n. 5.

[320] Picard-Cambridge: *op. cit.*, pp. 74, 130, n. 1, 230.

[321] The Mahawâṁsa. tr. Turnour. 1837. 49. cf. *Indian Antiquary*. 1887. p. 8.

[322] See M. Lindenau: "Spuren Griechischen Einflusses im Schauspielbuch (Nātyaśāstra) des Bharata Muni?" in *Festschrift Ernst Windisch*, 1914, pp. 38–42.

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resemblance exist in the theory of drama between the "Poetics" of Aristotle (1449b) and the Nāṭyaśāstra of Bharata.[323] Aristotle's unity of time is in Bharata the restriction of events to a day in any one act, while both stress unity of action and place. The *mimesis* of Greek drama is the *anukṛti* of the Indian, though the latter is not an imitation of action but an imitation of state or condition. Aristotle's distinction of characters as ideal, real and inferior, is Nāṭyaśāstra's division of characters as high, middle and low. Finally Aristotle's parasite is suggested in Bharata's description of the Viṭa. Long ago the Viṭa, Vidūṣaka and Śakāra were compared with the parasite, the *servus currens* and the *miles gloriosus* of Greek drama.[324] And it is these three together with the Sūtradhāra and his assistant who were given in the list of actors by Bharata as already mentioned. The Śakāra (an insolent upstart) as suggested by his name denotes a person of Śaka descent and it would appear that this character found its way into Indian drama during the Śaka rule in India,[325] or shortly after their downfall in 400 A.D.[326] Windisch claimed that the New Attic Comedy (320–260 B.C.) of the school of Menander and Philemon as preserved in the Roman adaptations of Plautus and Terence were the source of influence on Indian drama. Specific points of contact between Roman and Sanskrit drama include the division into 5 acts broken by intervals, the device of introducing a new character to the audience by one already on the stage, and a prologue for announcing the name of the poet of the play and preparing the mind of the audience. Some writers have declared these resemblances to be a coincidence and have disposed of the claim of borrowing in the case of the play Mṛcchakaṭikam, "the Toy Cart," in some detail.[327] Nevertheless it cannot be denied that the fair Perditas of Plautus and Terence who eventually turned out to be high-born daughters of Athenian citizens, have their counterparts in the maids of the Indian plays,

[323] A. B. Keith: *The Sanskrit Drama*, 1924, pp. 355–56.

[324] E. Windisch: "Der Griechische Einfluss im Indischen Drama," in *Verh. d. 5. Internat. Or. Congr.*, Berlin, 1882, II, ii, 3.

[325] Sylvain Lévi: *Le Theatre indien*, 1890, p. 361f.

[326] J. Charpentier: in *Journal of the Royal Asiatic Society*, 1925, p. 245.

[327] S. Lévi: Ch. "L'Influence Grec"; and Keith: *op. cit.*, p. 64. Despite the parallels of incident and even of literary device between Sanskrit and Greek romance (for which see L. H. Gray: *Vāsavadattā, a Sanskrit Romance*, 1913, pp. 35–7) they are totally different in plan and in spirit.

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Mālavikāgnimitra and Ratnāvalī who were princesses in disguise, and the *anagnorismos* or the recognition of the disguised maidens, a characteristic turning-point in the Graeco-Roman play, recurs in Indian plays with varying details (e.g., the recognition mark may be necklace, ring or garland). Recently an Indian writer has thrown all caution to the winds and claimed a whole host of borrowings in Kālidāsa from Greek myth and drama. In Kālidāsa's play "Hero and Nymph" he believes he has found for its opening scene a model in Sophocles' "Oedipus at Colonus"; behind the transformation of the nymph into a creeper in the Fourth Act he has found the metamorphosis of Daphne, a daughter of a river god, into a laurel tree; in Kāma making Rudra's heart his target, the love god Eros attempting to wound Apollo with his arrow. Again Kālidāsa's play "Raghuvaṁśa" is argued to be inspired in the curse in its first Canto by the Prologue of Euripides' "Hippolytus"; while the shower of gold in its 5th Canto is traced to the myth of Zeus visiting Danae as a shower of gold; and in the description of the dynasty of Raghu as "one whose chariot reaches to the sky," is seen an allusion to the airborne car inherited by Medea in Euripides' play of that name. These and other debts of the Indian playwright pose the question of how a Greek influence could be possible as late as the 5th Century A.D., and it is suggested that the much earlier traditional dating for Kālidāsa may well be right.[328] At this stage we have perhaps arrived at the beginning of a great debate, which we must leave others better equipped then ourselves to continue.

The period during which Sanskrit drama developed made it naturally susceptible to Greek influence. The practice of some form of acting and dancing (Naṭasūtras) is first mentioned by Pāṇini (IV. 3. 110) probably about 350 B.C., and by the time of Patañjali (c. 140 B.C.) we have clear references to schools of actors (IV. 2. 66) and players on instruments (IV. 4. 55). Music does not appear to have been a very respected profession in early India, for we read in Kauṭilya's *Arthaśāstra* (IV. ii. 202) that "traders, artisans, musicians, beggars, buffoons, and other idlers who are thieves in

[328] A. J. Karandikar: "Was Kālidāsa influenced by the Athenian poets," in *The Poona Orientalist*, XXIII, nos. 3, 4, July and October 1958, pp. 39–49. For a sustained attempt to date Kalidasa in the 1st century B.C. see V. K. Paranjpe: *Fresh light on Kālidāsa's Meghadūta*, 1961, p. 253f.

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effect though not in name shall be restrained from oppression of the country." If there was a Greek influence on Indian music it need not have been transmitted through practice alone but also through theory. We have among the Greek papyri found in Egypt one which includes a discussion of music possibly of Aristoxenus, and another musical treatise possibly of Hippias, while one papyrus actually has Greek musical notes.[329] A papyrus from Alexander's time at the Greek *polis* of Naucratis on the Nile Delta is the "Persae" of the poet and musician Timotheus.[330] Until excavation can reveal something more of the cultural life of the Bactrian Greeks we shall have to be content with the possible analogies of Greek settlers in their foreign colonies. Questions of art too must be held in abeyance until the cities and cemeteries of the Bactrian Greeks at Bactra, Alexandria-Kapisa, Puṣkalavatī, Sagala and Bucephala,[331] have yielded their treasure. Gāndhāran art is, as we know it, not beholden to Greek but to Roman influence, and we must therefore at this place postpone a discussion of it until we have seen how smoothly and effectively the Greek contacts with India gave way to the Roman.

[329] C. H. Oldfather: *Greek Literary texts from Graeco-Roman Egypt*, 1923, Numbers 104, 898–900, 901.

[330] U. Wilcken: *Alexander the Great*, 1932, p. 116.

[331] The site of Bucephala might have been near Jalalpur, about 25 miles below the town of Jhelum (J. P. Vogel in *Archaeologia Orientalia in Memoriam Ernst Herzfeld*, 1952, p. 231.) Another likely site for Bucephala is the extensive mound near the town of Jhelum itself 400 yards due west of the river where bricks, Graeco-Bactrian coins and an architrave of "Grecian sculpture" are alleged to have been found. (J. Abbot: in *Journal of the Asiatic Society Bengal*, XXI, 1853, p. 232. f.). In the Italian excavation at Udegram in Swat in 1960 a vase fragment bearing a scratched Greek name was recovered. (*East and West*, XII, no. 1, 1961, p. 29.) The remains of an ancient town was recently discovered near Shanwala on Jampur Dajal Road in the Dera Ghazi Khan District including a *mūrti* of a Greek soldier (*Dawn* June 1, 1960.)

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Chapter VI

ROMAN RELATIONS WITH INDIA

The material belonging to this chapter can be divided into three headings — Political, Economic and Artistic, and though these processes are interdependent, they may be treated in this fashion for purposes of clarity. Again, the evidence will be presented as tersely and precisely as possible, and in a chronological fashion.

(1) political

An Indian embassy is sent to Augustus (29 B.C. to 14 A.D.) of which three members only arrived at Antioch where they were encountered by Nicolaus of Damascus (Strabo. *Geog.* XV. 4 and 73). The letter in Greek on parchment that they bore was from Poros who claimed lordship over 600 kings. In this letter Poros expressed his desire to befriend Augustus, and as a gesture promised to open his dominion to him, and to assist him in any ventures within the limits of justice. Like all embassies of this nature, this one was accompanied by curious and characteristic gifts; there were eight slaves who were naked but for girdles. There were large vipers and a snake ten cubits long, there was a river tortoise measuring four cubits, and a partridge larger than a vulture. There was also an armless freak of a youth, and a gymnosophist who repeated what Kalanos had done by burning himself on the funeral pyre, and on his tomb was inscribed "Here lies Zarmanochegas (Sanskrit Śramaṇakarāja ?) of Bargosa (Broach), who according to the ancestral custom of the Hindus gave himself immortality."[1] There may have been other embassies to Augustus in addition to the one already mentioned, since he himself speaks of them in the plural when he claims that they were sent in honour of his accession, and that no other western prince had shared a like honour.[2] Details are given of these other embassies to Augustus. Florus (*Hist. Rom.* IV. 12) in 110 A.D. says that among the foreign ambassadors received by Augustus were "Seres and Indians, living right under

[1] cf. also Dio Cassius, LIV, 9; and Plutarch: *Alex*, 69.

[2] Monum. Ancyranum, 36 (Corpus Inscriptionum Graecorum, 4040, v).

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the sun, bringing elephants, as well as gems and pearls among their gifts," and having been four years on their journey. The embassy mentioned by Dio Cassius (LIV. 9) (194 A.D.) to Augustus at Samos in 22 B.C. might also have been a different one, for included among the gifts were tigers (though in the succeeding account the freak and the Sophist recur). Finally from a relatively late source, Orosius (*Hist.* VI. 12) of Tarragona in Spain (417 A.D.), we learn that Augustus was visited by Indian and Scythian ambassadors while he was in Tarragona (which would be from 27–24 B.C.). In analysing these various reports one writer has denied the authenticity of all but one of the embassies,[3] while another has felt confident in admitting four — dating them in 26 or 25 B.C., 21 B.C., 17 B.C., and between 14–11 B.C., and allocating hypothetical regions in India where they originated.[4]

The next attested embassy was from Ceylon in the reign of Claudius (41–54 A.D.) and is reported by Pliny (*Nat. Hist.* VI. 24). The incident began by the driving off course of a customs collector of Claudius,[5] whose ship was blown by a gale from the Red Sea to Hippuros, a port of Ceylon within a space of 15 days. This Roman official succeeded in learning the native language within six months, and then conversed with the king informing him of Rome and of Caesar. From the results of this knowledge acquired, and from the fact that the Roman denarii brought on the ship conformed to a standard weight (and therefore revealed stability and honesty) the Singhalese ruler desired to open diplomatic relations and sent one Rachias accompanied by three other ambassadors. Pliny claims he

[3] O. de B. Priaulx: *The Indian travels of Apollonius of Tyana, and the Indian Embassies to Rome*, 1873, pp. 65–87. Also B. A. Saletore: *India's Diplomatic Relations with the West*, 1958, pp. 216f, who assesses the various Indian rulers who may have been in the position to send embassies to the Romans (pp. 220–267). Note his theory that the embassy to Taprobane was not to Ceylon, but to the Tāmraparṇi of S.E. India (pp. 232–7). He also rejects the account of Nikolaus of Damascus on the suicide of Zarmanochegas since such a practice was evidently not prevalent in India (p. 223f).

[4] E. H. Warmington: *The Commerce between the Roman Empire and India*, 1928, pp. 35–7.

[5] This Plocamus' freedman is not named, but he may be the Iambulos of whom Diodorus (II. 55–60) says was taken by winds from off the Somali Coast to an island. He returned overland, stopping off at Palibothra (Warmington, *op. cit.*, p. 43).

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has derived his knowledge of their land, Taprobane, from them, but this account is full of the grossest errors.[6]

The third embassy is mentioned in passing by Dio Cassius (LXVIII. 156) in the reign of Trajan (98–117 A.D.). He says that upon Trajan's return to Rome in 106 A.D. the Emperor received many embassies from barbarian courts and particularly from the Indians. These he seated among the Senators to witness the gory spectacles of combat.

After this Hadrian (117–38 A.D.) received messages of friendship from Indian and Bactrian kings.[7]

We next hear of Indian ambassadors coming to pay homage to the virtues of Antoninus Pius (138–161 A.D.).[8]

Then comes the Indian embassy to Syria in 218 A.D. to welcome the Emperor Elagabalus (218–222 A.D.) to the throne. With them is Dandamis, who is the source of Bardesanes on the Indian gymnosophists.[9]

Among the ambassadors received by Aurelian (270–75 A.D.) at his triumph in 274 A.D. were Indians, not to mention Arabians, Persians, Saracens, Bactrians and Chinese.[10]

Then comes another fairly long break, and we hear of Constantine (306–337 A.D.) receiving Indian embassies in 337 A.D.[11] They brought presents to the king "as an acknowledgement that his sovereignty extended to their ocean," and told him that Indian princes had dedicated pictures and statues in his honour.

This is followed by an embassy to Julian (361–63 A.D.) from Indian tribes, including ambassadors from the Divi (Maldives) and Serendivi (the Singhalese). They arrived in 361 A.D.[12]

With the decline of the Roman Empire these contacts cease, and they are not resumed by the Byzantines, with one exception.

[6] Priaulx (*op. cit.* p. 93f.) cannot make the ambassadors guilty of falsehood, or of being ignorant of their own land, but suggests that they may have been Tamils, not natives, and that in any case their interpreter misunderstood them.

[7] *Historia Augusta. Hadrian.* 21 ; Warmington: *op. cit.*, p. 99.

[8] Aurelian Victor. Epit. XVI.

[9] *Historia Augusta. Elagabalus*, 23–4, 26–33. Also Dio Cass. LXXIX. 9.

[10] *Ibid., Aurelian.* 33, 41, 29, 45 ; Warmington, *op. cit.*, p. 138.

[11] Eusebius : *Vita Const*, IV, 7, 50.

[12] Ammianus Marcellinus : XXII. 7. 10.

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This was Justinian, to whom an Indian embassy brought gifts at Constantinople in 530 A.D.[13]

We have no clear evidence, that Western rulers in turn sent diplomats to the courts of Indian kings, and the reference of the Mahābhārata (Sabhā Parvan, ch. 51, vs. 16) to the Romaka coming adorned with helmets and clad in endless garments to the Emperor Yudhiṣṭhira with precious presents on the occasion of his coronation at Indraprastha (later Delhi), could equally well apply to a band of Roman merchants.

(2) Economic

Despite the successful navigation of Skylax from the Indus to the Red Sea (c. 510 B.C.), there is no evidence that this had any permanent consequence. The next to sail in the Indian seas was Patrocles, an officer of Seleucus and Antiochus I, and therefore between 312–260 B.C. It is through him that Eratosthenes acquired his knowledge of the geography of India. The shape of India could now be defined as rhomboid bounded on one side by the Indus, on another by the Himalayas, and on the two remaining sides by the Eastern and Southern Oceans. He knows of the mouth of the Ganges, of Ceylon and its elephants, of the South Indian inhabitants of Koniaki, and of the Etesian winds that bring summer rain (Strabo. I. I. 22 ; XV. 11 and 14).

The next Greek to sail to India was Eudoxus of Cyzicus, under the direction of Ptolemy Euergetes II (146–117 B.C.), and this time the voyage was not geographical but purely commercial (Strabo. II. 3. 4). On reaching India the goods transported were exchanged for spices and gems, which were appropriated by the monarch on the captain's return. Eudoxus repeated the voyage in the reign of Soter II (117–80 B.C.), this time on his return being blown off course along the African Coast. There he wrote down some words of the native language. An equiform ship's prow that he saw there was claimed by the natives to have belonged to a western ship. When he eventually returned to Alexandria with this prow there was speculation and some suggested that it belonged to a Cadiz ship which had gone astray beyond Mauretania.[14] It struck Eudoxus that it

[13] *Malalas*, p. 477 ; Priaulx : *op. cit.*, p. 126.

[14] In the same vein some planks of a wrecked Abyssinian ship discovered near the island of Crete led Masudi to speculate that they may have floated

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might be possible to reach India by going round Africa. He equipped his vessel at Cadiz with physicians, singing girls, skilled artisans, and bales of goods, and set sail for India, but this bold venture did not meet with success, the ship being grounded in offshore shallow waters *en route*.

The incident which led up to Eudoxus making his first voyage to India is interesting. A half dead Indian in a boat had been rescued at the entrance of the Red Sea and brought to Alexandria. There, when he knew enough Greek, he described how his ship had drifted for months while his companions perished of hunger, and he offered to show them the way to India should he be provided with a ship to take him home. What route Eudoxus took we do not know. Arrian says (*Indika* XXI) that while Alexander's ships hugged the coast, in later times ships sailed directly with the Monsoon (hippalum) from a promontory in Arabia called Syagros to Patala in India (at the mouth of the Indus). From the event already related of the blowing of a ship accidentally across the Arabian Sea in the time of Claudius, it would seem that the discovery of the use of the Monsoon for navigation did not take place until about then, that is c. 47 A.D. Ancient Arabian boats could have made use of the Monsoon winds despite having sewn hulls (instead of being nailed or dowelled), for such craft have been shown to be quite adequate for the purpose, and moreover the S. W. Monsoon was not hazardous to such ships provided they kept within the recommended schedule.[15] However, the credit for having made a systematic use of the wind goes to one who is known as Hippalus. Pliny, writing between 51–77 A.D. says (VI. 101) that reliable knowledge of the annual use of the south-west Monsoon and the voyage from Egypt to Muziris and Nelcynda in 40 days had only recently become available, so that the date of Hippalus might well be put at about 50 A.D. But the chronology of the two stages as described by Pliny prior to this are in dispute and one author puts the voyage from Syagros in Arabia to Patala on the mouth of the Indus as early as 90–80 B.C.,[16] while the more conservative author has 40–1 A.D.,[17] and

up to China, then round Mongolia, and entered the Mediterranean by some gulf. (*Muruj adh-Dhahab*, ed. B. de Meynard, 1861, I, pp. 365–6.)

[15] G. Van Beek : in *Journal of the American Oriental Society*, vol. 80, no. 2, 1960, pp. 135–9. [16] W. W. Tarn: *The Greeks in Bactria and India*, 1951, p. 368 f. [17] Warmington, *op. cit.*, p. 45 f.

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similarly the voyage from the Arabian coast directly to Sigerus (south of Broach) is dated by the two authors respectively as 60–50 B.C. and 41–50 A.D. The significance of accepting the higher chronology is that the use of the Monsoon by western shipping was not a sudden affair but was spread over a long span, and that Hippalus' contribution was only the last stage of an older process. That there was an interest in sea trade with India more than a century before Hippalus is suggested by the dedicatory inscriptions dating between 110–51 B.C. which refer to overseers (*epistrategoi*) in charge of affairs connected with the Red Sea and the Indian Sea.[18] But that the shipping of these times made limited use of the Monsoons, we can only infer by straining to the full the relevant passages in Pliny.

A similar dispute has arisen over the date of that invaluable treatise of western trade with India — The Periplus of the Erythraean Sea. The author of this treatise was an anonymous Greek merchant from Berenike on the Egyptian side of the Red Sea coast. One chronological point in the Periplus is a reference to King Malichas in Chapter XIX. He has been identified as the king of the Nabatean Arabs, Malik II.[19] This king was certainly flourishing in 69 A.D., for in that year he despatched 1,000 horsemen and 5,000 soldiers to Vespasian according to Josephus (*Bell. Jud.* III. 4, 2). Another Indian prince mentioned in the Periplus (ch. XLI) is Nahapana, and from an analysis of his date on the basis of Indian evidence, the Periplus has been put much later, between 110–115 A.D.[20] For our purpose it is quite sufficient to assume a date somewhere between these two extremes.

The Periplus lists the *emporia* (commercial ports) in India, describes their situation sometimes with their peculiarities, and itemizes the commodities exchanged there with foreign vessels. Here we give a brief summary of the trade of the most important ports :[21]

At the market town of Barbaricum at the mouth of the Sinthus (Indus) the goods exchanged were sent up country to Minnagara,

[18] M. Rostovtseff : *Social and Economic History of the Hellenistic World*, 1941, II, pp. 923–9.

[19] J. G. C. Anderson : in *Cambridge Ancient History*, X, 1934, p. 882.

[20] J. A. B. Palmer : in *Classical Quarterly*, vol. XLI, 1947, pp. 137–40.

[21] For full details and commentary, see W. H. Schoff : *The Periplus of the Erythraean Sea*, 1912.

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which he claims was then held by the Parthians. Imports included figured linens, topaz, coral, storax, frankincense, glass vessels, silver and gold plate and a little wine. Among the exports were costus (a plant for perfume), bdellium (an aromatic gum), lycium (a cosmetic), nard (Sanskrit *nalada* ointment from a plant, used also in drugs and cookery), turquoise, lapis lazuli, seric skins (Chinese furs), cotton cloths, silk yarn and indigo (paras. 38, 39).

Exports from the country around Ozene (Ujjain) through the port of Barygaza (Broach) included "many things for our trade" such as agate, cornelian, Indian muslins, etc. Among the imports were wine (perferably Italian), copper, tin, lead, coral and topaz, coloured girdles, and gold and silver coin "on which there is a profit when exchanged for the money of the country." "For the King there are brought into those places very costly vessels of silver, singing boys, beautiful maidens for the harems," and so on (paras. 48, 49).

Periplus then lists the market towns of the Dachinabades (Deccan) together with their trade and situation. Calliena (Kalyan), he says, was hostile to Greek ships landing there, which would be escorted to Barygaza under guard. (para. 51 f.)[22]

Further south he comes to the Damirica (Tamil country). Of Muziris (modern Cranganore) he says, it "abounds in ships sent there with cargoes from Arabia and by the Greeks." He also mentions Nelcynda of the Pandian kingdom of which the Dravidian equivalent might be Melkynda, "western kingdom," and its situation is suspected to be somewhere in the Cochin backwaters.[23] He says, "There are imported here in the first place a great quantity of coin, among other things, and exported fine pearls, ivory, silk cloth, spikenard from the Ganges, transparent stones of all kinds, diamonds, sapphires and tortoise shell" (paras. 54, 56).

Of the ports on the East coast of the Indian peninsula, among which he lists Poduca, he says "there are imported the greatest part of what is brought at any time from Egypt." (para. 60.)

Finally at the mouth of the Ganges his knowledge ends and he speaks of the island in the ocean opposite it as the last part of the

[22] For the Yavana at Kalyana see *Archaeological Survey of Western India*, IV, 93, 95.

[23] W. H. Schoff: *The Periplus of the Erythraean Sea*, 1912, p. 208.

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inhabited world toward the east — under the rising sun itself (para. 63.)

For all this vital information on the maritime trade of India in the 1st century A.D. we are indeed indebted to the author of the Periplus.

Shortly after the Periplus was written the knowledge of the geography of India was considerably enlarged by Ptolemy who derived much of his information from Marinus of Tyre's lost work (c. 120 A.D.); also "from those that sailed thither and frequented those places for a long time, and from those who came from thence to us" (*Proleg.* i, XVII); and it is now claimed that for the interior of India Ptolemy used a Purāṇic text available in a Greek translation.[24] Ptolemy has a distorted map of India and his errors are legion,[25] but he is able to carry us further eastward along Burma and Siam, to Java and Sumatra, and up the Indo-Chinese coast to the Gulf of Tonking.[26] With these parts now for the first time established on the map, a Roman mission is sent to South China c. 166 A.D. A Chinese annalist relates of the Ta-ts'in (Syrians): "They traffic by sea with Parthia and India, the profit of which trade is 10-fold. Their kings always desired to send embassies to China, but the Parthians wished to carry on trade with them in Chinese silks, and it is for this reason that they were cut off from communication. This lasted till a date corresponding with 166 A.D. when the King of Ta-ts'in Antun (Marcus Aurelius Antoninus) sent an embassy to the frontier of Annan offering ivory, rhinoceros horns, and tortoise shells. From that time dates direct intercourse with this country."[27] Antonine coins have in fact been found in the peninsula of Cochin China, and other objects, including a 2nd century Alexandrian lamp recovered in Pong Tük in Thailand,[28] as

[24] E. H. Johnson : in *Journal of the Royal Asiatic Society*, 1941, pp. 208–222

[25] cf. J. W. McCrindle : *Ancient India as described by Ptolemy*, 1927, p. XXI f This was inevitable since he was attempting to locate as many as 199 inland cities, 40 coastal towns, not to mention market towns and natural features.

[26] See Gerini : *Researches on Ptolemy's Geography of Eastern Asia*, 1909.

[27] Hou-han-shu. ch. 88. Partly written in 5th century A.D. and embracing period between 25–220 A.D. (Hirth : *China and the Roman Orient*, 1885, pp. 42, 173–8 ; and W. H. Schoff : *Parthian Stations*, 1914, pp. 42–3.)

[28] C. Picard : in *Artibus Asiae*, XVIII/2, p. 137 f.

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well as Roman beads at Khota Tinggi on the Johore River.[29] Two late Roman statuettes found in China are now in the Freer Museum in Washington.[30] Previous to the embassy of "Antun" we must at least assume indirect relations since bronze coins from Tiberius (d. 37 A.D.) to Aurelian (d. 275 A.D.) have been recovered from a town in Shansi,[31] while a ring in cornelian engraved with the figure of Augustus was found by a French Far Eastern Mission in 1939 and is in the Museum at Hanoi.[32] It would seem that in 226 A.D. a Roman sea captain (Ts'in-lun) travelling from Tonking visited the court of the Emperor Sun-ch'uan.[33] Also from the existing evidence it would seem that it was China who first made overtures to Rome. Later Han annals claim that in 97 A.D. the general Pan-Ch'ao sent Kan-ying as an ambassador from Central Asia to Ta-ts'in in Syria. They were dissuaded from returning from Chaldea by sea because of the length and uncertainty of the journey.[34]

Despite the length of the arduous sea voyage, trade flourished and from Pliny we obtain some glimpse of its volume. He says (*Hist. Nat.* XII. 84) that Eastern luxuries such as silks and other items of trade from India, China and Arabia drained 100 million sesterces of Roman money (equivalent to about £875,000), "so dearly do we pay for our luxury and our women." Of this trade more than half was with India (VI. 101). Indian wares reached Rome at 100 times their original cost (VI. 26). Pliny concludes that India had been brought near by gain (VI. 104). The commerce must be taken as having commenced under Augustus (d. 14 A.D.), for Strabo (d. 19 A.D.) claims that when he accompanied Aelius Gallus, prefect of Egypt, as far as Ethiopia, he saw about 120 ships sail for India from Myos Hormos (Mussel-Harbour, identified with Abu Scha'ar on the Red Sea Coast). He adds, that as against this, in Ptolemaic times scarcely anyone would venture on this voyage and the commerce with the Indies (II. V. 12). In the census of the

[29] M. P. Charlesworth: "Roman Trade with India" in *Roman Economic and Social History in honour of A. C. Johnson*, 1951, p. 137.

[30] A. W. Laurence: *Later Greek Sculpture*, 1927, p. 89.

[31] S. A. Huzzayn: *Arabia and the Far East*, Cairo, 1942, p. 119.

[32] J. Filliozat: "Les échanges de l'Inde et de l'Empire Romain," in *Revue Historique*, 1949, p. 18.

[33] Hirth and Rockhill: *Chau Ju-kua*, p. 5.

[34] G. F. Hourani: *Arab seafaring in the Indian Ocean*, 1951, pp. 15–16.

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year 72–73 under Vespasian an Egyptian was claimed to be absent in India.[35] When the Emperor Trajan (in 116 A.D.) saw a ship set sail for India he remarked nostalgically that were he still young he would embark on it himself. (Dio Cass. LXVIII. 28–9.) Meanwhile Rome was flooded with pearls, spices, gems and drugs from India. Even one object of art has been recovered from among these imports. It is an ivory statuette of a Yakṣiṇī at her toilet, which may have constituted a mirror handle, and which was found at Pompeii in 1938.[36] It must of course date from before the destruction of the city in 79 A.D. Still more recently a bronze statuette of an Indian girl was excavated in Oman in South Arabia,[37] reminding us that the Arabs of these parts played a role in the transit trade to the West. Another unexpected source through which we learn about trade relations with India are the Palmyrene inscriptions which mention direct contact between Palmyra and the Kushan-controlled region around the mouth of the Indus.[38] Appian in the early 2nd century A.D. confirms that Palmyrene merchants bring Indian commodities from Persia to Arabia which they dispose of to the Roman (*De Bell. Civ.* V. 9). Dio Chrysostom (I. p. 672) who died c. 117 A.D. includes Indians among such foreign visitors to Alexandria as Bactrians, Persians and Scythians. The use of cotton among the fabrics found in the N. Cemetery at Meroe in the Sudan, as well as in the Merotic lion god Apedemak having triple heads and two pairs of arms (on the Lion Temple at Naga built by Natakamani c. 15 B.C.),[39] we have concrete evidence for influences resulting from early trade with India. Some further details are learned from later sources. Epiphanius (c. 375 A.D.) speaks of Indian wares being distributed from Berenike over the Thebaid, and down the Nile to Alexandria and Pelusium, and thence overseas to different cities.[40] St. Jerome (c. 340–420 A.D.) refers to the port

[35] Kenyon : *Greek Papyrus in the British Museum*, II, 1898, pp. 48–9.

[36] A. Maiuri : "Statutte eburnea di arte indiana à Pompéi," in *Le Arti*, I, p. 111, 5. Also P. Vogel in *Annual Bibl. of Ind. Arch.*, XIII, pp. 1–5, for comparisons with Mathurā style.

[37] Albright : in *Archaeology*, 7, 1954, p. 244.

[38] Seyrig in *Mélanges Franz Cumont*, 1936, pp. 397–402, and in *Journal of Roman Studies*, XL, 1950, p. 6 ; H. Ingholt : *Gandhara art in Pakistan*, 1957, p. 26.

[39] A. J. Arkell : *A History of the Sudan*, 1955, p. 166, Fig. 21.

[40] Priaulx : *op. cit.*, p. 235.

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of Aila (successor of Ezion Geber) as the entrepot for trade with Egypt and with India, while Antonius Martyr c. 570 A.D. mentions the arrival at Aila of ships from India bearing cargoes of aromatics.[41] At this late date Mala or Malabar was still the chief seat of pepper trade according to Cosmas Indicopleustes (535 A.D.). He also says that at Serendip (Ceylon), which was a resort of ships from Persia and Ethiopia, the silk of Sinae-Roman China was imported and was distributed from there to India and other countries.[42]

An important evidence for Roman trade with India is the great multitude of Roman coins found there. We may recall that the Periplus had already informed us that gold and silver coins were profitably exchanged at Barygaza, and that in the Tamil country great quantities of coin were imported. In fact the greatest quantity of Roman coins discovered have been along the Coromandel coast and in the Coimbatore and Madura districts. A count of the discovered coins over half a century ago produced the following results : For the period up to 68 A.D. the Roman coins in South India included 612 gold coins and 1,187 silver. This excludes hoards discovered, such as five cooly loads of gold coins dug up near Cannanore in Malabar in 1851, and about 500 in an earthen pot.[43] In the period between 68–212 A.D. the coins diminish in the South and increase further north, though by then declined in quality. Thereafter the Roman coinage in India rapidly diminishes in quantity, but some coins of Theodosius, Marcian and Leo were found in a stupa near Jelalabad, and others of the later Roman Emperors in Ceylon, as well as of copper in a river bed at Madura.[44] Another distinct class of small copper coins well worn by regular circulation found at Madura are suggested to have been minted locally for daily domestic use by Roman traders resident here.[45] In the north we have already seen how Roman coinage influenced the Kushans. A coin of Huvishka (c. 106 A.D.) bears the inscription RIOM together with the figure of an armed woman representing

[41] H. W. Glidden : in *Journal of the American Oriental Society*, 62, 1942, p. 69.

[42] J. W. McCrindle : *Ancient India as described in Classical Literature*, p. 161.

[43] R. Sewell : "Roman Coins found in India." in *Journal of the Royal Asiatic Society*, 1904, p. 597. For up to date Catalogue of Roman coins in India see R. E. M. Wheeler : in *Aspects of Archaeology*, ed. W. F. Grimes, 1951 p. 375 f.

[44] Sewell : *ibid.*, p. 608–9. [45] *Ibid.*, pp. 609–15.

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the goddess Rome.[46] Huvishka is represented on a gold coin seated on a *bisellium* with characteristic Roman style legs, while Kadphises I is seated on the *sella curulis* on a coin which bears on the obverse a Roman imperial head.[47] It is a striking fact that in the Ara inscription of the year 41 Kaniṣka calls himself *Kaīsarasa* or Caesar.[48] Gold coins on the floor of the relic chamber in the stupa of Ahin Posh included 9 of Wema Kadphises, 5 of Kaniṣka, one of Huvishka, together with the gold coins of Domitian (81–96 A.D.), Trajan (98–117 A.D.) and the Empress Julia Sabina, wife of Hadrian (117–38 A.D.).[49] Coins of Antoninus Pius (138–61) and his wife — the latest, dated 159 A.D., found in the Rawalpindi district — were strung together by gold wire to form an ornament.[50] In Central India Roman coins were imitated in terracotta and pierced for suspension as ornaments.[51]

Excavation has now revealed one of the East Coast emporions of Roman trade. It is at the port of Arikamedu near Pondicherry, and it is equated with the Poduke of the Periplus. During the course of excavating the warehouse and quays a hundred amphorae of Mediterranean origin were found, and the red glazed Aretine ware may be dated between 25–45 A.D.,[52] for after this time the type had gone out of fashion. It is thought that here was not only a transit port for Roman ships but "a final entrepot for western tableware and bullion in return for pearls, gemstones, muslins and pepper."[53] Excavations at Nasik have revealed Samian ware showing Roman contact between 50–200 A.D.[54] It is not too much to hope that some day careful survey and coastal excavation will

[46] P. Gardner's *Catalogue of Greek and Scythic Coins*, 1896, Pl. XXVIII no. 20.

[47] H. K. Deb: in *Indian Historical Quarterly*, 1936, p. 155, n. 8, Pl. figs. 5–10.

[48] *Corpus Inscriptionum Indicarum* (S. Konow), II, Pt. 1, 1929, p. 162.

[49] W. Simpson in: *Proceedings of the Asiatic Society Bengal*, 1879, pp. 78, 134, 208.

[50] Hoernle: in *Ibid.*, 1886, pp. 86–9.

[51] R. E. M. Wheeler: *Rome Beyond the Imperial Frontiers*, p. 152.

[52] Finds of Roman Aretine ware made in 1950 at Timna in S. Arabia can be dated to c.10 A.D. (cf. W. Phillips: *Qataban and Sheba*, 1955; and A. L. Bowen and F. P. Albright: *Archaeological Discoveries in South Arabia*, 1958.)

[53] R. E. M. Wheeler: ed. Grimes, *op. cit.*, p. 354.

[54] H. D. Sankalia and S. B. Deo: *Report on the Excavations at Nasik and Jorwe*, 1950–51.

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reveal further evidences of Roman trade with India. The most promising site after Muziris might be the town on the coast of the pirates which Ptolemy (para. 7) calls Byzantion, a name which suggests that there may have been a Greek colony here, as there may have been in the town Theofila in the lower Indus (para. 60).

Another factor that attests this trade is the many Indian words for natural products that have found their way into western languages.[55] The word for camphor is one of the earliest loan words, for already c. 400 B.C. Ctesias uses *karpion*, which originates from Tamil *keruppa* and Sanskrit *karpūra*.[56] Others include *sacharum* from *śarkarā*, *zingiber* (ginger) from *śṛṅgavera*, opal from *upala*, musk from *muscka*, and sandal from *uchandana*. The word for aloes in Greek, *agallokhon*, which is used by Dioskorides in the 1st century A.D., may be derived from the Sanskrit for aloes wood *aghil*, or better still the Pāli *agalu*.[57] The Tamil *arisi* (rice) became the Greek *orydsa* which is mentioned by Theophrastus and Arrian.[58] Perhaps as a result of the great demand for the products, the native term for incense became *yavana* and for pepper *yavanapriya*. In this same fashion, incidentally, Assyria had contributed the names of plant products to western languages, including saffron from *zupiranu*, cotton from *kitu*, myrrh from *murru*, sesame from *semasammu*, and bratus (pine) from *burasu*.[59]

A curious detail comes to our aid in rounding out the picture of East-West relations of the Roman period. It is the identification of a South Indian language, Kannada, in a Greek comedy written on papyri of the 2nd century A.D. discovered at Oxyrhynchus in Egypt. It is concerned with a Greek lady named Chariton who has been stranded on the coast of a country bordering the Indian Ocean, and the king of that country addresses his retinue in the words Ἰνδων προμοι "Chiefs of the Indians," besides using his own language.[60] The Greek author of the farce could have acquired a smattering of the language in India itself, and we have seen

[55] For Indian loan words in European languages see Lökotsch : *Etymolog. Woehterbuch der europ, Worter orientalischen Ursprungs*, 1927.

[56] Caldwell : *A comparative Grammar of the Dravidian languages*, p. 105.

[57] J. Filliozat in : *Journal Asiatique*, 1958, p. 87.

[58] Hewitt in *Journal of the Royal Asiatic Society*, 1889, p. 205.

[59] R. C. Thompson : in *Classical Review*, vol. 38, 1924, p. 148.

[60] E. Hultzsch : in *Journal of the Royal Asiatic Society*, 1904, p. 399f.

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how Eudoxus wrote down some sentences of an East African language from curiosity. We may recall the Egyptian who was registered as being absent in India in the reign of Vespasian.[61] Then there was a lawyer of the Thebais, who, disgusted with his profession, had voyaged to Muziris, and according to Palladius (c. 400 A.D.), studied the soil and climate of the place and customs and manners of its inhabitants. He penetrated inland as far as the Besadae, where he was enslaved for six years, and learned their language. He was freed by order of the King of Ceylon through his "respect for the Roman name and fear of the Roman power."[62] Then again there was the Palestinian merchant Scythianus who had made several commercial voyages to India. He had returned and settled in Egypt after amassing great wealth. It was his disciple Terebinthus who took the name of Buddas.[63] Or a Kanarese trader to Egypt may have instructed the writer of the farce, for we know of an Indian traveller who, according to an inscription of the temple at Redesiye not far from Berenike on the Red Sea, halted to worship at the shrine of the Greek god Pan Euodos, in gratitude for his happy voyage.[64] Also much later, from Photius, we know of some Brahmins who visited Alexandria in 470 A.D., where they lodged in the house of Severus, Consul. They kept themselves secluded, ate palms and drank water. They told of monstrosities and freaks.[65]

Finally, from the early literature of the Tamils we obtain a vivid picture of the position and activities of the foreign traders.[66] A Tamil poet relates that the large beautiful ships of the Yavanas bring gold to the thriving town of Muchiri (Muziris) and return laden with pepper. Poems describe the abodes of the prosperous Yavanas at the mouth of the Kaneri river, of Yavana mercenaries who guarded the gates of the fort of Madura and of the Tamil king's tent on a battlefield, and of Yavana craftsmen who made

[61] *Ibid.*, p. 402.

[62] Priaulx : *op. cit.*, pp. 197–9. (Palladius refers to the markets of Ceylon being thronged with the merchants of Ethiopia and Persia.)

[63] *Ibid.*, pp. 172–3.

[64] Hultzsch : *op. cit.*, p. 402 ; cf. Lepsius : *Denkmäler*, VI, p. 813 and *Z.I.I.* 3, 1925, p. 318.

[65] Priaulx : *op. cit.*, p. 189.

[66] See V. Kanakasabhai Pillai : *The Tamils Eighteen Hundred Years Ago*, ch. iii, pp. 16, 24–6, and R. Mookerji : *A history of Indian Shipping*, 1912, pp. 128–9.

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siege engines. Among the skilled artisans who built the palace of the Cola king in the city of Kāvirippaṭṭinam (which included craftsmen from Magadha, mechanics from Maradam and smiths from Avanti) there were carpenters from Yavana. Another poem speaks of "statues of metal made by the Yavanas" holding lamps which lit a royal palace[67] (i.e., *dīpalakṣmīs* of a western type). With this notice of Yavana merchants engaged in building siege engines and palaces and some of their furnishings for Tamil kings we will turn now to the last aspect of this chapter.

(3) ARTISTIC

The links between Greek and Roman artistic activities in India cannot at present be established because of insufficient documentation. In the light of the evidence so far available practically all the pertinent artifacts found in India may be assigned to the Roman period. But we are evidently on the brink of new discoveries. On November 30, 1959, it was announced that a Graecian urn of copper having dolphins and three bronze handles and dating from the 3rd or early 2nd century B.C. was accidentally dug up at Charsada in the N. W. Frontier.[68] This place is known in a local inscription as Pukhala "the Lotus City,"[69] and in the Rāmāyaṇa (VII. 101. 11) as Puṣkala. It is the Peucela of Arrian (*Ind.* 1. 8 ; 4. 11 ; *Anab.* iv. 22 ; 28. 6). Alexander conquered this place from an Indian prince named Astes (Hasti). A coin with Indian legend figures the patron divinity of this city of Puṣkalavatī, the Greek city goddess clad in chiton and peplos, and wearing a mural crown, and she is holding in her hand what appears to be a poppy head.[70] Recent excavation

[67] V. R. R. Dikshitar : *Studies in Tamil Literature and History*, 1930, p. 260. The Saṅgam literature which contain these references to the Yavanas are held to describe events during the 2nd or 3rd century A.D. (cf. K. N. Sivaraja Pillai : *The chronology of the Early Tamils*, 1932 ; K. G. Sesha Aiyar : *Cera kings of the Sangam Period*, 1937, pp. 97–122. See now P. Meille : "Les Yavanas dans l'Inde Tamoule," in *Journal Asiatique*, t. 232, 1940–1, pp. 85–125.)

[68] *The Dawn*, December 1, 1959. The urn covered by a slate stone lid contained a complete corpse.

[69] Majumdar : in *Journal of the Asiatic Society Bengal*, XX, new ser., 1924, pp. 5–6.

[70] P. Gardner : *Coins of the Greek and Scythic Kings*, Pl. XXIX, 15 ; p. 162, and Rapson : in *Journal of the Royal Asiatic Society*, 1905, p. 787.

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has revealed the ditch and ramparts of Astes, and aerial photographs a chessboard town planning strikingly reminiscent of Sirkap, and consequently there is every promise of recovering antiquities dating back to the period of Greek domination.

At present we know only of Greek patrons who sponsored artistic works for Indian cult purposes. We have already had occasion to mention Heliodorus son of Dion, sent by King Antialkidas from Taxila to set up the pillar surmounted by a garuḍa at Besnager in Malwa. He may have been a Greek mason, for this was the first use of the polygonal pillar in India. Then we have Agasilaos, the maker of the reliquary in Kaniṣka's stūpa (in the Sangarama of Mahāsena), whose name is doubtless that of a Greek.[71] A Greek inscription at the temple of Surkh Kotal in Afghanistan names one Palamedes, but it cannot be established whether he was the architect, the contractor or just a functionary.[72] Next there is a Buddhist relic vase on which is inscribed: "This relic of the holy Śākyamuni is enshrined by Theodorus, the *meridarch* (district officer) for continuance during many births" (i.e., for continued well being during many rebirths). It is probable that this Theodorus was in charge of part of the Kabul territory under the Graeco-Bactrian rulers.[73] We know of a man by the same name in a Kharoshṭhī inscription from the Swat Valley, dated in the year 113 of an uncertain era. The inscription states that this Theodorus son of Datia caused a tank to be made "in honour of all beings."[74] Later, in Central Asia, a wall painting was signed by a Roman. On the hind-quarters of an elephant in Serinda is a Kharoshṭhī inscription which says "this fresco is the work of Tita, who has received 3,000 pieces of money for it."[75] This Tita must be Titus, and we do in fact know of one Titianus (a Macedonian silk merchant whose Greek name was Maes) and he it was who described the Turkestan trade route.[76] Again we have a Titasa in Kharoshṭhī script on a gem depicting a Śaka warrior.[77]

[71] *Journal of the Royal Asiatic Society*, 1909, p. 1058.

[72] R. Curiel: in *Journal Asiatique*, 242, 1954, pp. 194–5.

[73] W. Thomas: in *Festschrift E. Windisch*, 1914, p. 364.

[74] Buhler: in *Indian Antiquary*, 1896, pp. 141–2; M. Senart in *Journal Asiatique*, ser. IX, vol. XIII, 1899, pp. 531–4; also *JRAS*, 1903, p. 14, and *Corpus Inscriptionum Indicarum*, no. XXIV, p. 65.

[75] L. Woolley: *History Unearthed*, 1958, p. 129.

[76] W. M. Schoff: *Periplus . . .*, pp. 268–70.

[77] *Archaeological Survey of India. Report*, 1928/29, p. 137.

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Then there is the whole group of Yavanas mentioned in the cave inscriptions of Western India. Apart from the Yavana Irila, who has a foreign name, the others are all native Buddhists who have made architectural donations to the caityas and monasteries of Junnar, Karle and Nasik. The only sense in which these Yavana can be regarded as Greek is that they may have been Greek citizens or Indian traders with Greek affiliations. That they were rich merchants connected with overseas trade is suggested by the situation of the places mentioned in the immediate hinterland of the port of Calliena. Only one, the son of the Yonaka Dhammadeva, who made the gift of a cave (*cetiya ghara*) and a cistern at Nasik, could not have been a resident of these parts. The inscription says that he originated from Datāmitī, which is evidently the town of Demetrius. This is a town in Sauvira, according to the Mahābhāṣya of Patañjali, apparently founded by King Demetrius. The town Demetrius is mentioned by the geographer Isidore of Charax (ch. 19). In addition to the gifts at Nasik mentioned above, other Yavanas donated the following gifts — five gave pillars, one a hall front, and another a refectory for the monastic community.[78]

With these Yavanas in mind would it not be legitimate to ask if some foreign influence is detectable in the architecture of these cave monasteries ? Patrons though they were, they may have dictated to the craftsmen what type of hall or pillar they required. It seems to us that a foreign influence alone can explain why it is that the plan of these Caitya bears such a remarkable resemblance to the early Christian church. Behind both of them lies a common tradition — the private basilicas of the Roman Emperors. We have only to compare the plans of the Caitya halls at Bhaja and at Karle[79] (at Karle, we must remember, seven donors of pillars were Yavanas[80]) with the private basilicas of the Palatine, of Porto, of Kremna, and of Aspendos[81] to be convinced of their essential similarity. In each

[78] D. R. Bhandarkar : "Foreign elements in the Hindu population," in *Indian Antiquary*, XL, p. 7f, esp. p. 12 ; O. Stein : "Yavanas in Early Indian Inscriptions," in *Indian Culture*, 1935, I, no. 3, pp. 343–58 ; and W. W. Tarn : *The Greeks in Bactria and India*, 1951, p. 254–58.

[79] J. Fergusson and J. Burgess : *Cave Temples of India*, 1880, Pls. IX and XI.

[80] See *Lalit Kalā*, 1957, nos. 3–4, p. 23.

[81] G. Leroux : *Les origines de l'Edifice Hypostyle . . .*, 1913, p. 316, Fig. 72, cf. 73.

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case the structure is longitudinally disposed, with triple aisles, and terminates in a semicircular apse. The nave of the Caitya hall has close-set transverse ribs running right along its vault. In a cave excavation they can of course have no practical function and must in fact have been emulated from some wooden construction.[82] It is usually supposed that the prototypes were temples constructed in timber,[83] but is it not equally possible that the shape and structure were suggested by the timber framework of the hull of a ship ? It is notable that the term for the architectural *nave*, French *nef*, though it originates from the Greek *vaós* "temple," bears a close likeness to the Greek *vavs* "ship" and in German the nave is actually known as *schiff*. Be this as it may, if the plan of the Caitya is dependent on a private basilica, two sources of its introduction are likely — either Yavana builders were employed, or a Yavana building was emulated which existed already on Indian soil. For the first possibility we have already noticed a Cola king employing a Yavana architect. There is also the legend, for what it is worth, of St. Thomas voyaging to India to offer his services as a carpenter or architect to King Gondophares (reigned c. 19–45 A.D.). St. Thomas claims ability to fashion in stone "pillars, temples and courthouses, for kings."[84] For the second possibility we may refer to a temple dedicated to Augustus near Calicut on the Malabar Coast. The map of India of Peutinger marks the words *templum Augusti* on the place where Tyndis and Muziris occur.[85] The Cave Temples of Western India have been dated stylistically as early as 200 B.C.,[86] but if Roman influence is ultimately admissible then

[82] At Bhaja in Cave XII teak girders still exist in situ as the ribs of the roof. (Fergusson and Burgess : *op. cit.*, p. 223 f.)

[83] For example we are told that Chula Purna's *vihâra* was built of wood (Hardy : *Manual of Buddhism*, 1853, p. 260).

[84] M. R. James : *The Apocryphal New Testament*, 1924, pp. 366, 371. And Wright : *Apocryphal Acts of the Apostles*, II, pp. 146–7.

[85] M. Reinaud : *Relations Politiques et Commerciales de l'Empire Romain avec l'Asie Orientale*, 1863, p. 108. Tindis is obviously Kadalundi.

[86] This dating was dependent on the assumption that the Lomaśa Riṣi Cave in Bihar dates from Aśoka c. 250 B.C. The cave itself, it is true, is identical in dimension and disposition with the Sudana cave excavated according to the inscription in the 12th year of Aśoka's reign. But the former is the only architectural one in the group. So it is possible that the façade was added later. If it is insisted that the façade is a copy of a wooden original, we still

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their date will have to be brought down to the first century A.D., and this in fact is now the trend among some scholars.

At least it is now established that the architectural features that appear in the sculptures of Gāndhāra art are derived not from Greek but from Roman art. These include pilasters each with a panel upon it, and quasi-Corinthian capitals. The Greek fluted column is absent, and if the blocks or brackets of Gāndhāra are not derived from a native tradition they could be traced to the Roman modillions.[87] In Roman Palmyra for example we find such pilasters with panels and fluteless columns. The arch of Gāndhāra art too must be derived from the Roman semicircular arch and not from that of the Caitya caves. The latter are always accompanied by purlins showing their wooden origin, whereas these are absent at Gāndhāra.[88] A late date for some of the Gāndhāra sculptures is argued from the fact that the *dent-de-scie* moulding decorating the Gāndhāra arches is not found in the West until later (the edifice on the Citadel hill at Amman probably of the 6th century A.D.), and by the fact that the string course with a leaf decoration of the ogee moulding is a Byzantine form.[89] It has been shown that the

cannot presume an early date since we know that it took something like 1000 years to be freed from wooden trammels to the purely lithic style (Fergusson and Burgess: *op. cit.*, p. 224). And surely the makara on the façade cannot date from the 3rd century B.C., for if this were true then it would remain chronologically isolated until its next occurrence at Bharhut, Mathurā and Amarāvati. (But cf. D. Ghosh: "The makara in Indian Art," in *Calcutta Review*, 1930, p. 101f; and J. P. Vogel: "Le makara dans la sculpture de l'Inde," in *Revue des Arts Asiatiques*, 1930, p. 133f.) Stylistically, from the comparisons of the *mithunas* with those of Mathura, and epigraphically, from the inscription of Ushavadata, son-in-law of Nahapana, Karle is now dated by recent experts to the first quarter of the 2nd century A.D., and similarly Nahapana's cave X at Nasik is dated in 120 A.D. (D. Barrett: *Sculptures from Amaravati in the British Museum*, 1954, pp. 44.n.31, and 54–5.) Some of the details at Lomaśa Riṣi are encountered at Pitalkhora and at Nasik (See O. Viennot: "Le Makara . . ." in *Arts Asiatique*, V, 1958, pp. 281–2. Figs. 36–38), proving that they are directly related monuments. In fact Lomaśa Riṣi is now assigned by P. Stern to the early 1st century A.D. from stylistic and iconographical comparisons with Begram ivories. (J. Hackin and others: *Nouvelles recherches archéologiques à Begram*, 1954, I, pp. 38–41.)

[87] W. Simpson: "The classical influence in the Architecture of the Indus Region and Afghanistan," in *Journal of the Royal Institute of British Architects*, 1894, pp. 107–108.

[88] P. Spiers in *ibid.*, p. 151.

[89] *Ibid.*, pp. 114–115.

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single and double figures framed in a frieze of arches in Gāndhāra derive from Roman sarcophagi as for example the Sarcophagus of the Muses of the so-called Sidamara type,[90] of the 2nd century A.D. As for the spiralled column in this sarcophagus, it did not find its way to Gāndhāra, but did establish itself further south at Bagh (between Broach and Ujjain) in Caves 2 and 4,[91] and survived in later Indian architecture.

Not only are panelled pilasters and inhabited arcades introduced from the West into Gāndhāran art but Ionic columns were in use in N. W. India. At the Monastery of Shah-Dheri in the Peshawar Valley the capitals were Ionic derivatives, and a small Ionic volute was found at Hadda in the Jalalabad Valley.[92] The two columns *in antis* of the Jandial Temple at Taxila with their "egg and dart" and "bead and reel" mouldings were Ionic, and their bases correspond exactly with the pure Attic *cyma recta* mouldings as seen in the Erechtheum.[93] This edifice may have been a Parthian fire temple of c. 20 A.D. but opinions differ.[94] The plan itself with a *pronaos* (front porch), a *naos* (sanctuary), and an *opisthodomos* (or back porch) resembles a classical peripteral temple,[95] though it should be noted that there is a strong resemblance in the four-columned entrance hall and ambulatory of the Ayadana at Susa attributed to Artaxerxes II (405–358 B.C.).[96]

Another feature of classical origin used decoratively at Taxila was the gable. It was used over the false doorways in the shrine of the double-headed eagle at Sirkap, and in the Jaulian stūpa.[97] The

[90] H. Buchthal: "The Common Classical Sources of Buddhist and Christian Narative Art," in *Journal of the Royal Asiatic Society*, 1943, pp. 143–4. The "homme-arcade" motif on the Bimaran casket and on the stupa at Hadda, and the Ali Masjid stupa in the Khyber Pass must, it is argued, be later than the sarcophagus of Melfi in Lydia c. 170 A.D. (B. Rowland: "Gāndhāra and Early Christian Art," in *Art Bulletin*, March 1946, pp. 44–47.)

[91] J. Marshall: *The Bagh Caves*, 1927, Pl. 13.

[92] W. Simpson: *op. cit.*, p. 99.

[93] Cunningham: *Archaeological Survey of India, Report*, V, pp. 71, 72, 190, Pl. XVIII.

[94] We approve the suggestion of B. Rowland (in *American Journal of Archaeology*, 1935, pp. 489–96) that the builders were an earlier generation of Greeks in India who worked for the Parthians.

[95] J. Marshall: *Taxila*, 1951, I, p. 223f.

[96] Dieulafoy: *L'acropole de Susc*, IV, Fig. 264.

[97] J. Marshall: *Taxila*, III, Pls. 28, 30, and Pl. 111.

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broken pediment is found in the plinth of the Dharmarājikā stūpa.[98] Lastly the alternation of semicircular and 3-sided framing arches on the plinths of North Western stūpas seems to be derived from Roman or Byzantine alternation of semi-circular arches and pediments.[99]

A type of classical foliage much in favour was the acanthus frieze. In Taxila, for instance, it is found in a stone sculpture portraying scenes from the life of the Buddha.[100] In Gāndhāra we may point out an example from Kharkai.[101] Finally the acanthus frieze appears at Mathurā in a sculpture with seven Buddhas attributed to a date shortly before 129 A.D.[102] The V-shaped section of the leaves in Peshawar capitals, it is claimed, resembles the Greek and Byzantine foliage rather than the slightly concave Roman leaves.[103] An Indo-Corinthian capital from Jamal-Garhi with its triple range of acanthus and its helices rolled like horns calls for comment. It is of the type called 'inhabited capital' with a Buddha figure within it, and it was thought that the use of human figures in the foliage of Corinthian capitals was first employed in Rome in the time of Hadrian (117–38 A.D.),[104] though the earliest existing examples date from Caracalla (211–17 A.D.).[105] Now however, we are able to trace the type still earlier in Syria to the Nabatean Temple of Baal Samin at Si (23 B.C.–4 A.D.).[106] Another type of inhabited foliage represented at Gāndhāra is the rinceau of vine leaves. In a frieze from Sahri-Bahlol amorini, birds pecking grapes, rams, lions and other animals disport amid the meandering vine.[107]

[98] *Ibid.*, Pls. 46, 48, 57b.

[99] e.g. the wall niches of Theodosius II at Constantinople (Spiers : *op. cit.*, Fig. 19, p. 151.)

[100] Marshall : *op. cit.*, Pl. 219, no. 110.

[101] A. Foucher : *L'Art Gréco-Bouddhique du Gandhara*, I, 1905, Fig. 115.

[102] L. Bachhofer : *Early Indian Sculpture*, II, Pl. 87.

[103] P. Spiers : *op. cit.*, p. 153.

[104] Lanciani : *Pagan and Christian Rome*, p. 133 ; J. Fergusson : *History of Indian Architecture*, p. 178.

[105] V. A. Smith : in *Journal of the Asiatic Society Bengal*, III, 1889, pp. 162–3. See P. Gusman : *L'Art decoratif de Rome*, I, Pl. 43.

[106] E. Senart : in *Journal Asiatique*, February–March 1890, p. 149 ; and de Vogüé : *Syrie Centrale*, I, p. 31f, Pl. 3.

[107] L. Bachhofer : *op. cit.*, II, Pl. 149. See Marshall : *Taxila*, Pl. 215, no. 53 for a cornice with running vine scroll surmounted by a flat bead and reel moulding.

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Another frieze from Gāndhāra, now in the Museum of Fine Arts, Boston, is even more classical in feeling, and encloses successively amid the intertwined stems, a person drinking from a rhyton, a couple in amorous dalliance, a bearer of a basket of grapes, a man treading grapes, and an archer. Roman art has many prototypes to offer of the inhabited rinceau of vine, for example in Syria at Sidon, Baalbek and Palmyra,[108] but of these the nearest analogy is with the portal surround of the Temple of Bacchus at Baalbek, built, it is claimed, between 118–38 A.D.[109]

The laurel leaf torus moulding which is found in the Boston frieze and in several other sculptures in Gāndhāra[110] is to be found at Palmyra, and moreover in both centres a rinceau band is adjacent to it.[111] Other Palmyrene elements at Gāndhāra are pearled bands and 4-lobed rosettes,[112] and it is claimed, also the jewellery.[113] It is interesting to note that, in addition to the laurel wreath, the laurel crown finds its way to India. The goddess Harītī from Skarah-Dheri (dated 87 A.D.) has one,[114] while a fragmentary head from Sārnāth has a laurel wreath and mural crown.[115] A copper repoussé portrait bust from Taxila is enclosed in a laurel wreath medallion.[116]

There is a classical legend that Dionysus or Bacchus conquered India. While it would be folly to regard this as a historical event, there may be evidence that the cult of this god found some favour here.[117] Dionysus, a writer of the 3rd century A.D., in his "Description of the Whole World," describes how the festival of Bacchus

[108] J. M. C. Toynbee and J. B. Ward Perkins: "Peopled Scrolls . . ." in *Papers of the British School at Rome*, XVIII, 1950, Pls. XXI.2; XX.1; and XXII.2.

[109] B. Rowland: "The Vine-Scroll in Gandhara," in *Artibus Asiae*, XIX, 3/4, 1956, p. 353.

[110] E. G. Foucher: *op. cit.*, I, pp. 463, 547.

[111] H. Seyrig: "Ornamenta Palmyrena Antiquiora," in *Syria*, XXI, 1940, p. 290, Pl. XXX.

[112] H. Seyrig: *op. cit.*, pp. 305, 307.

[113] M. Rostovtzeff: in *Revue des Arts Asiatiques*, VII, 1931–2, p. 209.

[114] Bachhofer: *op. cit.*, II, Pl. 150, cf. 151.

[115] *Ibid.*, I, Pl. 13. (Date suggested c. 225 B.C. !)

[116] J. Marshall: *op. cit.*, Pl. 172u.

[117] On what we ourself consider to be flimsy evidence some authors contend that the source of the myth of Dionysus is to be sought in India in the god Śiva. (See Barthe: *Religion des Indes*; and H. Zaloscer: . . . *rapports entre l'Art Copte et les Indes*, 1947, p. 24n.)

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was ignored at a spot of holy ground along the Ganges, which enraged the god, who fashioned his ivy wreaths and curling vine-tendrils into coils of snakes, and henceforth the populace began to celebrate the orgies with all due rites.[118] One confirmation of this is the portly and drunken Silenus at Mathurā who is dressed in Brahmin fashion.[119] In the North-West Frontier the cult must certainly have been established, since a town was named Dionysopolis whose other name is given by Ptolemy (VII. 1, 42) as Nagara. This is identified as Nagarahara near Jelalabad.[120] At Taxila was found a silver repoussé head of Dionysus wreathed with gravevine and holding a two-handled wine-cup (*Kantharos*).[121] Further vintage scenes appear on Sirkap stone friezes, where the winged victories and amorini hold tankards while other putti play with grapes.[122] The Roman theme of a bridal pair holding goblets on a Sirkap stone tray[123] is absorbed into Indian art and appears in an Indian form at Amīn and Sāñchī.[124] A Taxilan stone tray had a Bacchanalian revel scene,[125] while on another tray a western woman dressed in chiton and himation reclines on a couch with a wine-cup. One of her flanking female attendants holds up a laurel crown in the Roman manner.[126] A Gāndhāra sculpture in the Lahore Museum has vine arbours with scenes including the treading of grapes in a vat, while another has two semi-nude girls one offering her male companion a drink, the other seated on her companion's lap, the whole adorning a pedestal with lion legs.[127] The girls are only distinguishable from Roman girls by their heavy Hindu anklets.[128]

[118] Orbis Descriptio, 1.1150f. (tr. in McCrindle: *Ancient India*, 1901, p. 190.)

[119] A. Cunningham: in *Archaeological Survey of India. Report*, I, p. 243.

[120] A. Foucher: *Afghanistan*, p. 279; and Tarn: *op. cit.*, p. 159.

[121] Marshall: *op. cit.*, II, p. 614, Pl. 209a; cf. a bearded Dionysus mask on base of a cast copper handled jug (Pl. 183d).

[122] *Ibid.*, p. 709, Pl. 216, nos. 73, 74.

[123] *Ibid.*, Pl. 144, nos. 67–71.

[124] G. Combaz: *L'Inde et l'Orient Classique*, 1937, Pl. 127.

[125] Marshall, *op. cit.*, p. 494.

[126] *Ibid.*, pp. 494–5, no. 63, Pl. 144.

[127] A. Foucher: *L'Art Greco-Buddhique du Gāndhāra*, I, 1905, Figs. 129, 130.

[128] J. L. Kipling: in *Journal of the Royal Institute of British Architects*, 1894, pp. 137–8, Fig. 17.

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Another genre scene is the prototype, or at least the parallel, of the Indian *mithunas* or loving couples. On one of the circular stone toilet trays from Sirkap a male figure pulls a himation or shawl from a female companion. One writer interprets the figures as a satyr and nymph,[129] and another as Apollo grasping the hand of Daphne,[130] both giving parallels. Again from Taxila we have an oval seal of cornelian engraved with Eros caressing the cheek of Psyche while the goddess places her arm on his shoulder.[131] A repoussé relief on a Taxila gold brooch has Eros holding Psyche by her breast.[132] Here we may observe another borrowing in the tutelary pair Pañchika and Harītī. One example found at Sahri-Bahlol actually has the genius clad in a chlamys and leggings while the fairy holds a cornucopia with fruit (in complete disregard for the fact that the animal horn is an unclean thing in Hindu tradition). The resemblance with similar couples in Gaul is striking, and indicates that both stem from a common Roman tradition.[133] The goddess with a cornucopia or "horn of plenty" occurs on a potstone statuette from Taxila ; she wears a classical tunic and mantle, and on her head a low *polos* such as the goddess Tyche or Fortune had on her head as early as the 6th century B.C. according to Pausanias (IV. 30).[134] We can see how this figure becomes Indianized on a later and cruder potstone sculpture from Taxila where she wears an Indian *sari*, necklace and bangle.[135]

Once again it is possible to show the progressive transformation of an artistic motif borrowed from the West—that of amorini bearing garlands. One example was found recently by the Russians on the marble side of a sarcophagus from Khersones near Sebastopol in the Crimea, but the date assigned to it (end of 2nd century B.C.)[136] is surely too early. To our knowledge the motif of erotes bearing garlands over their shoulders first appears on a terracotta frieze

[129] Marshall : *op. cit.*, Pl. 144, p. 494.
[130] H. Buchthal : *The Western Aspects of Gāndhāra Sculpture*, 1945, p. 6.
[131] Marshall : *op. cit.*, p. 681, Pl. 207, nos. 11, 11a.
[132] *Ibid.*, p. 632, Pl. 191u.
[133] A. Foucher : *The Beginnings of Buddhist Art*, 1917, p. 139f, Pls. XVII, XVIII.
[134] H. Hargreaves in J. Marshall : *op. cit.*, pp. 699–700. She held "the horn of Amalthea."
[135] *Ibid.*, p. 700, Pl. 211, no. 2.
[136] A. L. Mongait : *Archaeology in the U.S.S.R.*, 1959, Pl. opp. p. 201.

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from the time of Augustus,[137] and on the representation of a tomb from the time of the early emperors.[138] It survives a considerable time, for the frieze from Palestrina probably dates from Constantine (306–337 A.D.).[139] Meanwhile the motif is found at Baalbek and Palmyra,[140] and on a sarcophagus from Tell Barak in Palestine,[141] but in each case the erotes are winged. In the various versions of the same theme in Gāndhāra[142] the erotes are not winged (although the garland-carrying figures at the Fire Temple of Surkh Kotal in N. Afghanistan are winged),[143] but in some reliefs there are winged figures in the loops formed by the garlands. Figures in the loops of the garlands as well as bunches of grapes hanging from the base of it are still further unmistakable evidence of western origin. As absorbed in Indian art, the theme occurs at Mathurā, and again at Amarāvatī, where the undulating garlands are borne by the counterparts of amorini — fat little stunted and nude *yakṣas*.[144]

The popularity of the use of garlands in India ensured its success as an art motif. Through literature we have a notice that the residence of nāgarikā Vasantasenā had (on the pillars supporting the *toraṇa* of the gate) garlands hanging low and moving to and fro by the wind.[145] In fact a festival of flowers in common use in Ancient India is claimed to have originated the so-called woman and tree motif (Sālabhañjikā) on the toraṇas and pillars at Sāñchī, Bodhgaya and Mathurā.[146] If this is correct, then the supposed Hellenistic Egyptian origin will have to be given up and the fact that the motif is found in Coptic Alexandria be explained in some other way.[147] Another Coptic motif, the woman with a veil forming

[137] P. Gusman : *L'Art decoratif de Rome*, 1910, I, Pl. 13.

[138] *Ibid.*, I, Pl. 13.

[139] Visconti : *Museo Pio-Clementino*, VII, Pl. XXV.

[140] Combaz : *op. cit.*, Pl. 111.

[141] H. Ingholt and I. Lyons : *Gāndhāran Art in Pakistan*, 1957, Pl. VI. 1.

[142] Foucher : *op. cit.*, I, p. 239, Figs. 116–18, also Kaniṣka's reliquary, II, Pl. opp. p. 796 ; Ingholt : *op. cit.*, nos. 374–80.

[143] D. Schlumberger : in *Journal Asiatique*, 1952, p. 433f ; Pl. VIII.

[144] Combaz : *op. cit.*, Pls. 113–114.

[145] Mṛcchakaṭikā cited by G. P. Majumdar in *Indian Culture*, July 1936, p. 86.

[146] P. Vogel : in *Acta Orientalia*, VII, Pts. 2, 3, 1928, pp. 230–1.

[147] V. Smith : *A History of Fine Arts in India and Ceylon*, pp. 71–3. Also Strzygowski : *Hellentistische und Koptische Kunst in Alexandrie.*

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an arch over her, is claimed to have entered Egypt directly from India, together with Yakṣiṇī and Yogi[148] but from extant representations it is possible to trace Rome as a source for both lands, since we encounter the nereid with the veil on Roman sarcophagi, on a "Graeco-Bactrian" silver statuette, and surely only then on a relief from Kashmir and at the Temple of Aihole.[149] A related theme, the garland-bearing winged figures at Sāñchī, is claimed to have been borrowed from the West, for example from the winged genii at Pompeii.[150] But the theme is to be found already at Barhut, for which an early date has been claimed,[151] and until a more accurate chronology for the early Buddhist monuments has been fixed it would be unwise to decide positively that the garland-bearing winged figure of India derives from the Roman version of the Winged Victory.[152] In one hitherto unnoticed instance, at the comparatively late Temple of Pandranathan in Kashmir, the winged genii supporting the circular plate of the ceiling[153] resemble in their position and function the winged figures supporting Roman and early Christian "Dome of Heaven" type of ceilings.[154] The most undeniably Western of all the supporting figures in Indian art are the atlantes of Gāndhāra. Two figures, one from Jamal Garhi now at the Calcutta Museum and another from Sikri now at the Lahore Museum,[155] strongly recall Heracles in the rendering of beard, hair, and muscular abdomen. As parallels one may adduce the atlantes from Apamea,[156] from the Neronian stage front of the Dionysus theatre in Athens, and from a late Antonine peristyle at Ascalon.[157] Again we find the motif at Barhut and subsequently at Mahābodhi, Bhuwaneshwar and elsewhere, but in a thoroughly Indian form.[158]

[148] H. Zaloscer: *Quelques Considérations sur les rapports entre l'Art Copte et les Inde*. Le Caire, 1947, p. 34.

[149] See *Ibid.*, Figs. 2, 3, 4, 6 and Pl. IX. For further examples of the billowing scarf motif in classical art see C. H. Morgan in *Art Studies*, VI, 1928, p. 163f.

[150] A. Ippel: *Indische Kunst und Triumphalbild*, 1929, p. 22. Taf. 16.

[151] L. Bachhofer: *op. cit.*, I, Pl. 28. He gives mid-2nd century B.C. for Barhut.

[152] See Combaz: *op. cit.*, Pls. 115–118, and pp. 171–3, for widespread dissemination of motif in later times.

[153] A clear illustration in *Marg*, VIII, March 1955, no. 2, p. 48.

[154] cf. K. Lehmann: "The Dome of Heaven," in *Art Bulletin*, XXVII, March 1945, no. 1.

[155] Foucher: *op. cit.*, I, p. 209, Fig. 87; II, p. 45, Fig. 325.

[156] Combaz: *op. cit.*, Pl. 108.

[157] References in Ingholt, p. 155, no. 387.

[158] Combaz: *op. cit.*, Pls. 109–110.

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Not all motifs introduced at Gāndhāra found general favour elsewhere in India. Two in particular come at once to mind. The first is the theme of erotes riding on lions. We have an example of this from the Mian Khan Monastery in Kashmir.[159] On a Roman sarcophagus of the 2nd century A.D. erotes ride lions which draw the chariot of Bacchus.[160] In recent years, at the foot of a patrician's house at Timna in South Arabia, were found two large bronze lions with infant riders. One writer has suggested that the smiling infant is fashioned after the type of an Alexandrian Horus-Harporrates, the rising sun, and the lions are solar animals.[161] Whatever may have been the origin of the figure we do not believe that such a gravity attaches to its meaning, at least in its later manifestations. The other explanation more in keeping with the levity of the theme is that in the Alexandrine *erotopaegnia* (love sports, amatory poems) of the Anacreontic school, Eros becomes a boy and rides all sorts of animals including lions.[162]

The second theme of classical origin which had no issue in later Indian art was the eagle bearing his victim heavenward. Of three Gāndhāran specimens, two were from the Monastery of Sanghao and one from Nathou, and of the former, one had served as a crest of a turban of a Bodhisattva image. The subject in its native context represents a garuḍa flying off with a Nāgī held in his talons frontally against his breast. This identification is made all the more certain by the serpent held in the beak of the bird. The enmity of the eagle and serpent is a very widespread theme, but this particular rendering of it with the role of the serpent played by a young girl must, it is generally agreed,[163] have been inspired by the figure of the youth Ganymede being translated to heaven by Zeus in the form of an eagle. The classical prototype, of which

[159] H. Cole: *Illustration of Ancient Buildings in Kashmir*, 1869, Pl. 26; and Foucher, *op. cit.*, I, Fig. 91. Also on Taxila tray (Marshall, III, Pl. 144, no. 72) and on relief from near Charsada (Ingholt, no. 396).

[160] P. Gusman: *op. cit.*, 1910, I, Pl. 56.

[161] B. Segal: in *American Journal of Archaeology*, vol. 59, 1955, pp. 207–14.

[162] Perry: *History of Greek and Roman Sculpture*, p. 629; and V. A. Smith in *J.A.S.B.* III, 1889, p. 136.

[163] Zaloscer (*op. cit.*, p. 49), however, argues that both the swan of the Vedas and of the Greek Leda, and the eagle of Ganymede and of Garuḍa are motifs belonging to a common Indo-European fund, which the Greeks have adapted to serve as the amorous adventures of a god.

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there were many Roman copies in marble, was the bronze of Leochares (372–330 B.C.) which had been appreciated by Pliny.[164]

This motif was successfully transposed by Buddhism into a theme of their own making, but in a number of other instances they borrowed fabulous animals from classical sources purely for decorative purposes and without attempting to explain them through a mythology of their own construction. The very absence of explanation of the tritons, centaurs, hippocamps and sphinxes which are to be found in their art but not in their literature is conclusive evidence for their foreign origin.[165] A brief mention of the places where these creatures first became naturalized in Indian art might provide us with some clue as to their source of entry. We begin with the centaur because in this instance the horse-bodied quadrupeds with human heads and arms at Sāñchī, Mahābodhi and Mathurā do not evince any direct hellenic influence, and the borrowing, it is suggested may be from the Ancient Orient where the motif first originated.[166] However we must not omit to notice the Gāndhāran centaur now at Lahore which once decorated the base of a stūpa, for, judging from what is preserved of it, it would seem to be a classical type.[167]

With the triton we are on firmer ground. On the silver coins of the Graeco-Bactrian King Telephus (c. 70–60 B.C.) occurs the serpent-legged giant in a form recalling the frieze at Pergamum,[168] c. 180 B.C. This is followed by the triton group with serpent legs on the coins of Hypostratus (c. 60–50 B.C.), evidently holding a dolphin and rider.[169] The double tailed triton in the latter coin closely resembles the tritons on a Gāndhāran frieze from Charsada.[170] At the Museum of Calcutta is preserved a Gāndhāran triangular panel of unknown provenance with another theme from Pergamum,

[164] Foucher: *op. cit.*, II, pp. 32–40; V. A. Smith: *op. cit.*, III, 1889, p. 132, See now H. Sichtermann: *Ganymed. Mythos und Gestalt in der antiken kunst.* Berlin, 1953.

[165] Further for the Mesopotamian origin of Indian winged lions, winged horses and winged goats see Combaz: *op. cit.*, Pls. 56, 59, 60.

[166] Combaz: *op. cit.*, p. 145 and Pls. 73–79. See also P. C. Baur: *Centaurs in Ancient Art*, 1912.

[167] Ingholt: *op. cit.*, no. 391.

[168] W. W. Tarn: *The Greeks in Bactria and India*, 1951, pp. 333, 496, n. 8.

[169] P. Gardner: *Catalogue of the Coins of Greek and Scythic Kings. . .*, 1886, Pl. XIV. 6; Tarn: *op. cit.*, p. 394.

[170] Foucher: *op. cit.*, I, p. 242, Fig. 124.

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a gigantomachia wherein a young hero is battling against a triton with club.[171] On another Gāndhāran sculpture from Peshawar a triton holds its own serpentine legs,[172] and it is this type which recurs at Sārnāth and Mathurā.[173] One word here about the origin of this creature. As far as we are aware the triton grasping its own serpentine legs occurs first on a bronze pin from Luristan in Iran[174] and then among the Etruscans of Italy, where in one instance it neutralizes its own malignant power by means of inverted tridents.[175]

Under what we have termed as hippocamp we will class all aquatic and marine monsters. A true hippocamp — a horse-bodied sea monster with a Nereid rider — occurs on a grey schist toilet tray from Sirkap.[176] This motif is found for example in Roman tomb decoration.[177] Another female figure seated on a (wolf-faced ?) sea monster in the Haughton Collection is remarkably like that on a provincial Hellenistic silver plaque.[178] On yet another stone tray from Taxila the nereid with child rides an undulating sea monster whose resemblance with the Eros riding one on a Roman silver patera is all but complete.[179] This Eros is seated on the back of the dragon and is attacking it with a trident, and we ourself have no hesitation in seeing in it the prototype of the figure who, on Stūpa III at Sāñchī,[180] is seated on the back of a coiling dragon and is attacking it in the Mithras pose.[181] Then there are the ichthyo-centaurs, or centaurs with fish-tails, which occur at Mahābodhi in much the same fashion as they do at Gāndhāra.[182] Finally there is the bull-fronted dragon at Barhut which is also anticipated in the West,[183] though the elephant-fronted dragon at Barhut and

[171] *Ibid.*, p. 244, Fig. 125. [172] Ingholt, no. 395.

[173] Combaz, Pls. 85, 86. Also Bodh Gayā (A. W. Lawrence : *Later Greek Sculpture . . .*, 1927, p. 73).

[174] A. Godard : *Bronzes du Luristan*, Fig. 158.

[175] Beazley : *Etruscan Vase Painting*, Pl. XXXV, 1.

[176] Marshall : *Taxila*, III, Pl. 144, no. 74 ; Also Pl. 145, no. 82.

[177] P. Gusman : *op. cit.*, I, Pl. 51.

[178] Smirnov : *Oriental Silverwork* (in Russian), 1909, Pl. CX, no. 285. H. Buchthal : *Western Aspects of Gāndhāran Sculpture*, 1945, p. 6, Pls. 5–6. cf. Marshall : *op. cit.*, III, Pl. 145, no. 77.

[179] Buchthal : *op. cit.*, Figs. 7 and 8. [180] Combaz : *op. cit.*, Pl. 87.

[181] e.g. cf. Buchthal, Fig. 42. [182] Combaz : *op. cit.*, Pl. 89.

[183] *Ibid.*, Pls. 91 and 93.

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elsewhere,[184] must be regarded as the invention of native sculptors working in a tradition that was ultimately alien.

The last of the fabulous motifs which we have chosen is the winged sphinx — the couchant quadruped with human face. Of this we have some rare examples at Pitalkora[185] and in Cave VIII at Nasik.[186]

We know from some inscriptions that the Indo-Greeks both patronized art in India and were the owners of artistic objects. There are for example the inscribed signet rings — one found in Besnagar of Timitra (Demetrius),[187] another from Taxila of Denipa (Deinippos),[188] and yet another from Bajaur of King Theodamus.[189] At Bajaur an inscription on the bottom of a casket from the time of Mahārāja Miṇaṁdra (Menander) was written by *Viśpila aṇaṃkaya* which is interpreted as being the Hellenistic 'avayka ιος, a term used in Hellenistic times for a ruler's "advisors."[190] On a sculpture of a wrestler from Peshawar there is inscribed *Miṇaṁdrasa*, the gift of Menander,[191] indicating that there were other later inhabitants of the North West who had the name of the famous king. Then there is epigraphical evidence that western type objects were owned by Indians. The *phiale mesomphalos* (or round silver dish with a raised central boss) from Taxila has the name of the owner, Miṁjukritasa,[192] as against another silver bowl from the same site which is inscribed with the name of Theodorus son of Thavara.[193] This verifies the statement of the Periplus noted earlier, that among the western imports at Barbaricum were silver plates and glass vessels. The sea green translucent flasks from Taxila are typically Roman blown glass,[194] and the glassware excavated at Begram in Afghanistan (assigned to the 3rd quarter of the 1st century A.D.) was similarly believed to have been made in Roman

[184] *Ibid.*, Pl. 92. [185] *Ibid.*, Pl. 70.

[186] Fergusson and Burgess : *op. cit.*, Pl. XXIII.

[187] D. R. Bhandarkar : in *Archaeological Survey of India. Report*, 1914–15, p. 77 ; Tarn : *op. cit.*, p. 389.

[188] S. Konow : in *Corpus Inscriptionum Indicarum*, 1929, Vol. II, 1, p. 101, no. 7. [189] *Ibid.*, p. 6, no. 111.

[190] N. G. Majumdar : in *Epigraphia Indica*, XXIV, Pt. 1 ; and S. Konow : in *JRAS*, 1939, pp. 265–6.

[191] Konow in *Corpus Inscriptionum Indicarum*, II, 1, p. 134, no. 70.

[192] J. Marshall : *Taxila*, II, p. 612, Class V.

[193] *Ibid.*, p. 612, Class IV. [194] *Ibid.*, p. 685f.

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Syria.[195] Even some of the furniture and utensils at Taxila were of western type, including an iron folding chair with crossed legs and an iron candelabra, and for the bronze ladles and spoons and a gadrooned flat copper saucer, Roman prototypes have been cited.[196] Some western style terracotta and stucco heads from Taxila, as for example the head of a youth from Dharmarājikā Stūpa and the head of a satyr from the apsidal temple, would seem to have been made from imported moulds.[197] Another imported object was the copper incense burner from Sirkap whose handle is in the shape of a horned and winged lion. Though this type originated in Iran, it is also found at Palmyra and Hatra.[198] Further indications that the imported objects at Taxila arrived by sea and not overland are first, an oval seal engraved with cupid and cock,[199] of which a similar intaglio was found at the Roman trading port of Arikamedu,[200] and next a flat bowl of bronze with a ram's head handle terminal from Taxila, of which an example has now been found in a cave near the Red Sea.[201] Lastly we have the gargoyle through whose mouth the water flows, in one rare instance in a Gāndhāra sculpture from Sikri.[202] The only other example of this very common classical feature (derived from Egypt) of which we are aware, was a water basin of red sandstone with a bull's head gargoyle on the side excavated at Brahminabad, 60 miles north-east of Hyderabad in Sind,[203] a place which could fit the description of the Minnagara of Periplus,[204] but for some unaccountable reason it has been

[195] J. Hackin : *Recherches Archéologiques a Begram*, Chantier no. 2, 1937.

[196] Marshall : *Taxila*, pp. 533–4, no. 54 ; Pl. 163, nos. 33–5 ; and nos. 306–08. Cf. also Nazimuddin Ahmad : The History and Archaeology of Taxila. (University of London Ph.D. Thesis, June 1958), p. 219f. and p. 234.

[197] cf. Marshall, p. 441 ; see Ingholt, nos. 508, 560, for opinions of sources for these. Cf. D. H. Gordon in *Journal of the Asiatic Society of Bengal, Letters*, X, 1944, pp. 1–12.

[198] References in Ingholt : *op. cit.*, p. 180, no. 493.

[199] Marshall : *op. cit.*, p. 679, no. 14.

[200] R. E. M. Wheeler : in *Ancient India*, no. 2, Pl. XXXIII, B. 11, 12.

[201] *Daily Telegraph*, July 22, 1960, p. 18. For other Roman examples see N. Ahmad, *op. cit.*, pp. 219–20.

[202] J. Marshall : *The Buddhist Art of Gandhara*, 1960, p. 75.

[203] A. F. Bellasis : in *Journal of the Bombay Branch of the Royal Asiatic Society*, V, 1857, p. 467.

[204] This was also the belief of D'Anville (*Eclaircissements Géographiques*, p. 37), and Reinaud (*Mémoire sur l'Inde*, p. 61).

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neglected as an archaeological site despite its promising character. No doubt excavation and chance discoveries will enable us to fill out this picture of Romano-Indian artistic relations still further, and consequently will make it possible to trace more precisely how the dissemination of art motifs actually took place.

At least from our analysis of architectural features and motifs introduced from Rome into Gāndhāra, we can quite confidently reject direct Roman influence on Gupta Art (400–530 A.D.), for which a considerable case has been made out recently.[205] Such features of Gupta architecture as the *templum in antis* (but cf. Jandial Temple of Taxila), scroll friezes in which *gaṇas* play, torus mouldings of laurel-leaves, flanking-flying *gandharas*, and the triangular gable and semicircular arch of 8th century Kashmir, are all encountered before in North-West India, and the most that we can say is that they are Roman influences which have been most abiding, and have succeeded in having a new lease of life in classical Hindu art. As regards an influence in the very theory of architecture, this does seem possible, though the actual manner in which it took place is at present shrouded in mystery, particularly because the place and date of composition of Indian treatises are notoriously difficult to fix. Striking similarities have been noted between Vitruvius and the *Mānasāra* such as the classification of orders into exactly five, the division of mouldings into eight, and proportionate measurement varying equally from six to ten diameters and tapering almost in the same way. The best authority of the Indian architectural treatises is convinced that behind this resemblance there is something more substantial than mere coincidence, and he for his part has no hesitation in admitting the high probability of an influence direct or indirect of one upon the other.[206]

It was long ago suggested that the multiform idolatry of India arose as a result of contact with the image-making Greeks.[207] The subsequent discovery that the Indus peoples may have had personified images of their gods does not alter this possibility. The Aryans of India who succeeded them had no interest in images. In the ṚgVeda the gods are largely personifications of natural phenomena.

[205] H. Goetz: "Imperial Rome and the genesis of classic Indian Art," in *East and West*, Vol. 10, no. 3, 1959, pp. 153–82; no. 4, pp. 261–8.
[206] P. K. Acharya: *Indian Architecture*, 1927, p. 153.
[207] V. A. Smith: *op. cit.*, 1889, p. 193.

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They are only vaguely anthropomorphic and were not iconographically represented.[208] (For one possible exception see p. 25.) The Aryans of Iran were actually averse to image worship, and all Pahlavi writings refer to it as an abomination.[209] Zoroaster requests the avoidance of idolatry in Yasht (XXIV. 37. Cf. 59.) Cambyses and Xerxes destroyed images of gods (Herodotus III. 37. VIII. 109). Herodotus says (I. 131–32) that "it is not the practice of Iranians to erect statues (or temples, or altars) but they charge those with folly who do so, because, as I conjecture, they do not think the gods have human forms." In India it is not impossible that rude images were worshipped at remote wayside shrines in the later Vedic age as a survival from the phallic and related cults of the Indus, but the first authentic reference to the cult of images is not attested until the middle of the 2nd century B.C. by Patañjali. For fully a century previous to this Indians were familiar with the deities of the Graeco-Bactrians as represented on their coins. For example on a coin of Diodotus there is Zeus, of Euthydemus — Heracles, of Archebius — Nike holding wreath and palm.[210] The Śaka rulers in India adopted the Greek deities in the coins: Maues had Heracles, Zeus, Apollo, Artemis and Poseidon placing his foot on the shoulder of the River god;[211] and Azes had Demeter and Hermes on one coin, Pallas on another, and a winged Nike with wreath and palm on a third.[212]

Greek gods were also known in India through works of art. Heracles in his lion's skin for example is represented on the base of a handle of a mixing bowl (*krater*) from Taxila.[213] A bronze statue of Heracles strangling a lion was found in Quetta Miri.[214] Another bronze statuette of Heracles standing with one arm resting on hip came from Nigrai in Gāndhāra.[215] But the most famous is the Heracles strangling the Nemean lion, at Mathurā.[216] A

[208] A. A. Macdonell in *Journal of the Royal Asiatic Society*, 1916, p. 126; 1917, pp. 592–602; 1918, pp. 526f.

[209] A. V. W. Jackson: in *Sir Jamshedjee Jeejibhoy ... Jubilee Volume*, p. 274.

[210] Marshall: *Taxila*, II, p. 798f, nos. 39, 40, 50, 51f, 65, 75.

[211] Marshall: *Taxila*, II, p. 805f, nos. 111, 112, 120, 129, and 114.

[212] *Ibid.*, p. 809, nos. 146, 150, 152. [213] *Ibid.*, p. 433, Pl. 130 e.f.; 204a.

[214] *Journal of the Asiatic Society, Bengal*, 1887, LVI, Pt. 1, Pl. X, p. 163.

[215] Foucher: *op. cit.*, II, Fig. 476, cf. 328.

[216] J. Anderson: *Catalogue and Handbook of the Archaeological Collections in the Indian Museum*, 1883, Pt. I, p. 190; Bachhofer: *op. cit.*, II, Pl. 97, says it resembles a Hellenistic drunken Dionysus leaning on a companion.

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beautifully carved statuette from Gāndhāra represents the helmeted Athena or Roma, both identifications being possible.[217] There are other Gāndhāra goddesses that are quite classical in their modelling and dress but cannot be identified since they are headless.[218] A goddess in a repoussé relief on a brooch and another in bronze — both from Taxila — have been identified by the excavator as Aphrodite.[219] A solid cast bronze statuette from Sirkap is the child god Harpocrates wearing the crowns of Upper and Lower Egypt and raising his finger to his mouth.[220] Two other bronze figures of Harpocrates were found at Begram north of Kabul.[221] At Begram, which is the ancient Kapisa of Hiuen Tsang, was discovered a hoard among which were many Roman gods and heroes, including Dionysus with satyrs and maenads, Silenus, Ganymede with the eagle Zeus drinking from his cup, Athena, Aphrodite, Eros and Psyche, Ulysses and Diomede, Hercules, Tyche of Alexandria, and two portraits of poets.[222] From Gāndhāra we have an interesting stair-riser with several muscular figures in relief reminiscent of the Pergamum style. These bearded men with high boots and acanthus loin cloths bear boat paddles on their shoulders. They seem to be river gods, and specifically the five are suggested to symbolize the five rivers of the Punjab, with the sixth holding a dolphin — the sea.[223] This relief and other related ones from Gāndhāra have been dated to the end of the 1st century A.D. from Flavian and Trajanic stylistic affinities, and the suggestion made that foreign itinerant sculptors were employed.[224] A reclining river god from Gāndhāra has been compared with other examples of Roman river gods symbolising the Rivers Jordan, Belos, Nile, Euphrates and Tigris.[225]

[217] Ingholt : *op. cit.*, Fig. 433, pp. 168–9. But cf. C. C. Vermeule : *The goddess Roma in the Art of the Roman Empire*, 1959.

[218] *Ibid.*, p. 150, Figs. 357, 358. [219] Marshall : *op. cit.*, Pls. 186b, 191s.

[220] *Ibid.*, II, p. 605, Pl. 186e.

[221] J. Hackin : *Nouvelles Recherches Archéologiques a Begram*, 1954, Figs. 322, 324. [222] O. Kurz, in J. Hackin : *op. cit.*, pp. 108–9.

[223] J. Marshall : *The Buddhist Art of Gāndhāra*, 1960, pp. 36–7, Fig. 47. Cf. this British Museum relief with a similar one in the Metropolitan Museum, New York. (Ingholt : *op. cit.*, Pl. IV, 2.)

[224] B. Rowland : in *Archives of the Chinese Art Society Of America*, IX, 1955, pp. 8–17.

[225] Ingholt : *op. cit.*, Fig. 392, p. 156. Incidentally Kauṭilya (IV. 3) advocates the worship of Ganges in times of draught.

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Finally we may recall that a statuette of the sea god Poseidon was unearthed with a Roman bronze vase at Kolhapur (identified with Ptolemy's Hippokura) in Southern Bombay Province.[226] How many more classical deities must lie buried in Indian soil ?

One important result of the sudden spate of icons was the decision to make images of the Lord Buddha. Whereas in the early Buddhist monuments at Barhut, Bodh Gayā and Sāñchī, no attempt was made to represent the Buddha, and his presence was indicated only by symbols, such as his footprint, or his umbrella, or by the Bo-tree, the wheel of law, or an empty throne, on the stūpa at Amarāvatī (c. 180 A.D.) numerous images of the Buddha appeared. A considerable body of literature has accumulated on the dispute as to whether the Buddha was first represented at Gāndhāra or in Mathurā, and a convenient summary of the views expressed is available.[227] The Western elements in the iconography of the Buddha to which we shall presently refer leads us to favour the former area. Perhaps the earliest representation of the Buddha is on a coin of Kaniṣka where he is named in Greek letters BOΔΔO.[228] This is not likely to be later than 150 A.D. Next must come the two dated images of the Buddha from Loriyān Tangai and from Charsada, dated in the 318th and 384th years of an unspecified era. To identify this with the Seleucid era of 312 B.C. would result in too early a date. The Vikrama era of 58 B.C. might perhaps be the one implied, but the most likely is the Śaka era of 150 B.C. which would give us the dates 168 and 234 A.D.[229] Despite the fact that these Buddhas wear the *saṅghati*, the manner in which the folds of their garments is carved in a series of ridges disposed in repeated parabolic loops, makes it strikingly akin to the Roman toga drapery, say in the monument of Marcus Aurelius (161–180 A.D.). And as this same drapery technique is found in Parthia, Palmyra and Gāndhāra, an independent development in each case

[226] *Fasti Archaeologici*, 6, 1953, p. 283, Fig. 102 ; Wheeler : *Rome Beyond the Imperial Frontiers*, 1954, p. 151, Pl. XXVIIA ; C. Picard in *Artibus Asiae*, XIX, 3/4, 1956, p. 342f.

[227] H. Deydier : *Contribution a l'Étude de l'Art du Gandhara*, 1950, pp. 46–64 ; W. W. Tarn : *The Greeks in Bactria and India*, 1951, p. 396f.

[228] P. Gardner : *Coins of the Greek and Scythic Kings* . . . , p. 130, no. 16. Pl. XXVI, 8.

[229] B. Rowland : "A revised chronology of Gandhara Sculpture," in *The Art Bulletin*, XVIII, 1936, p. 391.

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is unlikely.[230] The swallow tail folds of the dhoti of the Bodhisattvas are an adaptation of the neo-Attic style that flourished in Rome under Hadrian.[231] Two other artistic techniques claimed to have been borrowed by the Buddhist sculpture of Gāndhāra from the Romans are first the separate episodic portrayal of the Buddha story instead of the continuous narrative which was in use earlier, and second, the use of illusionistic depth.[232] In addition to this, the manner of portraying two actual scenes in the life of the Buddha was borrowed from Roman art. It has been shown that the Great Renunciation on the eastern gate at Sāñchī and at Gāndhāra derive from the theme of the triumphal entry (*adventus*) of the Emperor into a town, and for his triumphal departure (*profectio*) as represented on Roman Imperial coins of the 2nd and 3rd century A.D.[233] The other scene that of the prostrate figure before the Buddha is known in Rome, for example, in a frieze from Trajan's time (early 2nd century A.D.), representing the victory of the Romans over the Dacians.[234] Most important of all when the Gāndhāran sculptors began to carve the image of the Buddha they took Apollo as a model, and the steps from the model to the copy have more than once been plotted.[235] For instance, a small terracotta head from North-West India is identical in facial features, and in tufted coiffure with the head of Apollo Belevedere in the Vatican.[236] Stucco heads show the same essential features, and this extends even to the ladder mode of portraying hair surmounted by a twisted scarf. The three heads which have been juxtaposed in this connection are from the Roman city of Sabratha in Tripolitania, a Bodhisattva from the Jaulian monastery in Taxila, and one from Hadda in Afghanistan.[237]

[230] B. Rowland: "Gandhara and late Antique Art, the Buddha image", in *American Journal of Archaeology*, XLVI, 1942, pp. 223–36.

[231] B. Rowland: *Art and Architecture in India*, 1953, p. 82.

[232] *Ibid.*, pp. 82–3; and Buchthal: *Western Aspects of Gandhara Sculpture*, 1945, p. 14.

[233] Buchthal: "The common classical sources of Buddhist and Christian Narrative Art," in *J.R.A.S*, 1943, pp. 138–9.

[234] *Ibid.*, pp. 140–1.

[235] A. H. Longhurst: in *Illustrated London News*, March 9, 1929, p. 394; Masson-Oursel, etc.: *Ancient India*, 1934, Pl. VII.

[236] R. E. M. Wheeler: "Romano-Buddhist Art: an old problem restated," in *Antiquity*, 23, 1949, Pl. IA and B.

[237] *Ibid.*, p. 16, Pl. X. See also Pl. VIIIA.

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The very story of the birth of the Buddha seems to have been borrowed from the birth of Apollo in classic myth. Apollo the babe leapt to life as Eileithyia (the goddess of birth) cast her arms around a tall palm tree.[238] So the child Gautama was born when Queen Māyā took hold of the branches of the Palāśa (*Butea Frondosa*) tree.[339] There is even a possibility that the Buddhist myth has a Christian origin, since not only does the palm tree bend down to Mary, but both the mothers Mary and Māyādevi conceive miraculously and both remain virgins after childbirth. This is to be found in the Lalita Vistara of Gautama.[240] These added to other parallels such as the idols falling down when Christ and Buddha are each carried into the Temple, and both teaching their teachers the meaning of the letters of the alphabet[241] would seem to be a convincing case for borrowing on the part of the Indian legend. Other elements from the life of Christ appear to have been incorporated into the Krṣṇa legend including the boy god, his humble birth in a cowshed, his reputed father's knowledge that he (Krṣṇa) was not his son, his raising the son of a widow from the dead, and the massacre of the innocents (Kaṁsa kills all the infants of Mathurā).[242] These parallels are too persistent and striking to be explained away.[343] The Harivaṁśa, which is the chief authority for the deeds of the cowherd Krṣṇa, must be of post-Christian date since it contains the word *dīnāra*, corresponding to the Latin dinarius, and one writer believes that the legends of the child Krṣṇa arose as late as after 600 A.D.[244] It has been suggested that the similarity of the names of Christ and Krṣṇa gave rise to the identification of the two personalities and to have caused the transfer of the stories of the former to the latter.[245]

[238] Cox: *Aryan Nations*, II, p. 21.

[239] S. Beal in *Indian Antiquary*, IX, 1880, pp. 69–70.

[240] See the Lalitavistara. tr. Rajendralala Mitra. 1882–86.

[241] J. Kennedy: "The Gospels of the Infancy," in *Journal of the Royal Asiatic Society*. 1917. Pp. 512–14. There are striking resemblances between Christian and Buddhist rites. (See J. Leipold: *Schenute von Atripe*. 1903; and A. J. Edmunds: *Buddhistic and Christian Gospels*, 1908.)

[242] R. G. Bhandarkar: *Vaishavism, Saivism and Minor Religious Systems*, 1913, pp. 37–8; Kennedy: *op. cit.*, p. 537f.

[243] H. G. Rawlinson (*India and the Western World*, p. 177) curiously considers most of the parallels "vague and unsatisfactory."

[244] Hopkins: *The Religions of India*, 1894, p. 431.

[245] Weber: in *Indian Antiquary*, XXX, 1901, p. 286.

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There is evidence that Christianity was introduced quite early in India. We have already referred to the legend of St. Thomas visiting India shortly after the death of Christ. The Acta Thomae (between 2nd–4th century A.D.) states that he visited the Malabar.[246] We know from Eusebius (E.H. V. 10) that Pantainos, head of the catechetical school of Alexandria who died after 211 A.D., was sent to preach the Gospels to the Indians.[247] Eusebius goes on: "There, report says, he found that the Gospel according to Matthew had been introduced before his arrival, and was in the hands of some of the natives, who acknowledged Christ. To them Bartholomew, one of the Apostles, had preached, and left with them that Gospel written in the Hebrew character and preserved to this day." Next we have it on the authority of Rufinus (330–410 A.D.) that the philosophers Metrodorus and Meropius of Tyre went to India (c. 302 A.D.) to see its towns and country and the world generally. The latter took with him his pupils, Aedesius and Frumentius (consecrated Bishop of Ethiopia c. 326), and after they had examined everything in India that was noteworthy, they took ship to return home, which they did via Ethiopia.[248] By the time that Cosmas Indicopleustes wrote (535 A.D.), Christianity was established in a number of places — at Male (Malabar), Calliena (Kalyan), in Ceylon, and at the Island of Dioscorides (Socotra, from Dvīpa Sukhadara = "Island abode of Bliss").[249] As a final reminder that Rome had contributed not only her paganism but her Christianity to India, we cite the bronze statuette of St. Peter holding a key found in Charsada but since lost. It had every vestige of being a direct derivation of its 5th century A.D. bronze prototype which is in the Basilica of St. Peter at Rome.[250]

[246] R. Sewell: in *Journal of the Royal Asiatic Society*, 1904, p. 611.

[247] J. W. McCrindle: *Ancient India as described in Classical Sources*, 1901, p. 214.

[248] Priaulx: *The Indian travels of Apollonius . . .*, pp. 179–80. Cf. the rather tall story by Cedrenus (11th century) of Metrodorus introducing water-mills and baths in India, and stealing pearls and precious stones from their temples. (*Ibid.*, p. 182.)

[249] J. W. McCrindle: *The Christian Topography of Cosmas*, 1897, pp. 118–19 and 365. According to Periplus (para. 30) Arabs, Indians and Greeks were settled on the island.

[250] B. Rowland: "St. Peter in Gāndhāra" in *Gazette des Beaux Arts*, 6th ser. XXIII, 1943, pp. 65–70; also M. Bussagli in *East and West*, IV, no. 4, 1954, p. 252f.

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Chapter VII

PARTHO-SASSANIAN EXCHANGE WITH INDIA

It is now doubted that the Parthian invasion of India goes back to Mithridates I (171–138 B.C.), for this assumption is founded on no good evidence beyond the statement of Orosius, "a late writer of uncertain accuracy."[1] It is more likely as Justin (XLI. 6) says that he extended his Empire in the east at most as far as Mt. Caucasus, or the Hindu Kush. Strabo (XI. 9. 2) also only goes so far as to state that the Parthians conquered Bactria from the Scythians. When Maues the Saka king took Taxila (c. 77 B.C.), he took the title of Mithridates II "Great King of Kings,"[2] that is to say, his coins have on one side *Basileus Basileon* in Greek, with *Mahārajasa Rājarājasa* in Prākṛt on the reverse. Under the Kushan king Kaniṣka, the title was rendered in Scythic as *Shaonano Shao*, which is a distinct reminder of the Achaemenid original *Kshāyathiyānām Kshāyathia*.[3]

If Achaemenid contact had ceased long ago, and if Parthian contact had yet to begin, it is difficult to imagine how Puṣyamitra, founder of the Sunga dynasty and dispossesser of Mauryas (c. 185 B.C.), could have been influenced by Persian example in adopting the name Mitra. In Iran Mithra was worshipped when Herodotus wrote, and must have suffered an eclipse when Darius adopted Ahuramazda as his sole god; but Mithra was once again adopted into the State religion by Artaxerxes II.[4] It has been suggested that Puṣyamitra may have been an Iranian, a worshipper of the sun, Mithra.[5] The fact that according to Kālidāsa, he revived the

[1] N. C. Debevoise: *A political History of Parthia*, 1938, pp. 56–7.

[2] H. C. Rawlinson: *Bactria*, 1912, p. 105; and Tarn: *Greeks in Bactria and India*, p. 322.

[3] R. D. Wilson: "Titles of the Persian Kings," in *Festschrift E. Sachau*, 1915, pp. 179–207.

[4] R. Ghirshman: *Iran*, 1954, p. 155, and H. S. Nyberg: *Die Religionen des alten Iran*, 1938.

[5] V. A. Smith: *The Oxford History of India*, 1920, p. 118.

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aśvamedha or horse sacrifice in India,[6] would at first seem to suggest that he sought his inspiration in the Vedas,[7] where horse sacrifice is attested (Ṛg Veda I. 162), and if this is true then his ruling deity would be the Vedic Mitra and not the Avestic Mithra. He was at any rate a staunch Brāhman and persecutor of Buddhists, and by reverting to animal sacrifice had negated the work of Aśoka. On the other hand, we must point out that horse sacrifice was a common Indo-Iranian custom, being found at Luristan, where the horse was sacrificed and buried with his master,[8] and as far afield as Southern Palestine, where it had been brought by Indo-Iranian migrants, probably in the 16th century B.C.[9] In Babylonia, where horse sacrifice was adopted, an extraordinary detailed resemblance has been noted between the sacrificial ritual practised in connection with it and that described in the Vedas.[10] If horse sacrifice had become morbund in India it certainly had not done so elsewhere, for we have Herodotus' word (I. 216, IV. 61) that the practice was current among the Massagetae and the Scythians, that is to say in the South Russian steppes. The Massagetai, he says, sacrifice horses to the sun which is "their only god," and of the Scythians he specifies that their king would have his horse buried with him together with his concubine, cook, cupbearer and chief members of his household. We know again from Herodotus (VII. 113) that the practice subsisted among the Persians, for when Xerxes arrived at the bank of the Strymon his Magian priests sacrificed white horses. Xenophon (*Cyr.* VIII. 24) confirms that the persians sacrificed horses as well as bulls to their gods, and Arrian (*Anab.* VI. 29) observes that a horse was sacrificed to Cyrus at his tomb in Pasargadae. Now since we shall presently cite evidence that the practice

[6] The practice of *aśvamedha* in the 2nd century B.C. is also confirmed from inscriptions (see *Indian Antiquary*, 1932, p. 203, and *Journal of the Bihar and Orissa Research Society*, X, p. 202 f.

[7] See P. E. Dumont: *L'Aśvamedha, description du sacrifice solennel du cheval dans le culte védique*, 1927.

[8] Legrain: *Luristan Bronzes in the University Museum of Pennsylvania*, 1935, p. 5.

[9] F. Petrie: *Ancient Gaza*, I, 1931, pp. 3–5.

[10] Especially in the role played by the Pleiades represented by a tuft of hair. (W. F. Albright and P. E. Dumont: "A parallel between Indic and Babylonian Sacrificial Ritual," in *Journal of the American Oriental Society*, vol. 54, 1934, pp. 107–128.

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of exposing the body of the dead to birds of prey had been prevalent in Taxila we may be sure that this particular custom was introduced by Magian priests who practised it, in contrast to the Persians who buried their dead.[11] The Magi were a Median race who acted as priests of the Persians (Herodotus I, 101, 132). Cyrus had introduced Magian priests into Persis after his conquest of the Medes (Xenophon : *Cyrop.* VIII. 1. 23).

If it is true that the aśvamedha is essentially a fertility rite, and the ceremony connected with it is a ritual imitation of the course of the sun,[12] then we can indeed show that it had similar implications outside India. Xenophon specifies that Armenians sacrificed horses to the sun (*Anab.* IV. 5. 34). And since Vardanes I sacrified to the sun a white horse of Nisa adorned as if for a festival according to Apollonius,[13] does this not suggest that horse sacrifice was a solar ritual in which Mithra was being honoured ? Even in the Ṛg Veda (V. 81. 4), the sun himself is said to be Mitra.

From the above discussion presenting the comparative evidence for Mitra and *aśvamedha* we cannot come to any absolute conclusion that Puṣyamitra was an Iranian or that he was under the influence of Magian priests. All that we can safely say is that if the initial impulse for his ideas came from outside they were soon reconciled with native ideas (since Puṣyamitra's successor Agnimitra[14] takes his name from a Vedic god), and perhaps we may go even further and say that both god and sacrifice met with such signal success because they already occupied a position in their own lore reaching back into a dim past.

It is contended that the alien concept of a Messiah and the appellation Maitreya were adopted in India through Iranian contact.[15] At any rate some Persian influence may be expected when the Parthians dominated North-West India. That they did so is certain, for we have kings with Parthian names on coins, and

[11] R. Ghirshman : *op. cit.*, p. 156.

[12] S. Bhave : *Die Yajus' des Aśvamedha*, 1939.

[13] Philostratus. I. 31. Cf. G. H. Schneiderwirth : *Die Parther oder das Neupersische Reich unter den Arsaciden*, 1874, p. 186 ; and J. M. Unvala : *Observations on the Religion of the Parthians*, 1925, p. 17.

[14] His coins have a deity with flaming hair who must be the Vedic god of fire, Agni. (J. Allan : *Catalogue of the Coins of Ancient India*, 1936, p. cxvii).

[15] B. E. Abegg : *Der Messiasglaube in Indian und Iran*, 1928, pp. 242–4, and Rowland in *Zalmoxis*, I, 1938, p. 69 f.

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Pacores and Arsaces are, for example, not only Parthian in name but in portrait, with their diadems and beards.[16] The most eminent Parthian ruler in India appears to have been Gondophares, whose date (c. 21–c. 45 A.D.) is established by the Takhti-Bahi inscription. He must be the Phraates whom Apollonius found ruling Taxila in 44 A.D. Gondophares seems to have copied a unique silver coin of Mithridates II (d. 88 B.C.), having on one side the seated king holding an eagle and crowned by a city and he also uses an epithet found only on Parthian coins.[17] A nephew and satrap of Gondophares by the name of Zeionises has such a coin,[18] and an inscription proves he ruled in Taxila.[19] From coins also we know that Gondophares' governors were Sapedana and Satavastra, and his *strategoi* or military governors were Aspavarman and Sasa.[20] Finally we know from the Periplus (ch. 38) of the existence of a Parthian realm in the region of the Indus delta in the 1st century A.D. He also confirms the existence of trade between India and Parthian Mesopotamia when he says (ch. 35, 36) that large vessels regularly loaded with copper, sandalwood, timbers of teakwood, and logs of blackwood and ebony came from Barygaza to Apologus, a harbour at the mouth of the Euphrates.

The Parthian interlude in India must have been of short duration. From the evidence of inscriptions it came to an end by 65 A.D., when the Kushans occupied the Gāndhāra region.[21] Under them there was a resurgent Iranian influence. The fascination of Kaniṣka lies in his adoption not only of native but of Greek and Iranian gods, as is evident from his coins, which have the names in Greek letters beside the figures. Of the Greek gods there are Helios, Selene and Heracles, and of the Persian, Miiro (Mithra, Sun), Mâo (Mâh, moon), Āthsho (Atash, fire), Oado (Vât, wind), Orthagno (Verethraghna), Pharro (hvarena, glory), Nana (Anahita) and so on.[22]

[16] Gardner: *Coins of the Greek and Scythic Kings . . .*, 1886, pp. XLIII LIX.

[17] *Ibid.*, pp. XLIV–XLV. [18] *Ibid.*, p. 110.

[19] *Corpus Inscriptionum Indicarum*, II, 1, p. 81, no. XXX.

[20] D. C. Sircar: in *The Age of Imperial Unity*, ed. R. C. Majumdar, 1951, p. 129.

[21] Panjtar inscription of the year 122 (by Scytho-Parthian era = 65 A.D.). Sircar: *op. cit.*, p. 130.

[22] M. A. Stein: "Zoroastrian deities on Indo-Scythic coins," in *Babylonian and Oriental Record*, August 1887, pp. 155–166.

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From this it is apparent that the sun and the moon occur in both their Greek and Persian forms. Here we must focus our interest on the sun-figure, and we begin by observing that the figure of Helios is identical with that on bilingual coins inscribed with the name of Miiro, and that the latter has a radiate halo behind his head.[23] Sun worship must have been one of the important cults at Taxila. Apollonius of Tyana (c. 42 A.D.) saw and described the Sun Temple at Taxila.[24] The Viṣṇu Purāṇa confirms that some members of the solar race became rulers of Gāndhāra with Taxila as capital.[25] For all his eclectic approach, Kaniṣka must have favoured sun worship, since the sun god is found on his relic casket,[26] quite apart from his coins. It is evident that the Kushan kings popularized the Sūrya image, for the reason that we find it dressed in Kushan manner. These kings are themselves clad in Central Asian fashion with pointed caps, tunics, open coat, trousers and high, heavy boots.[27] Not only does the Indian Sūrya acquire a foreign dress but it is entirely likely that his quadriga or four-horsed chariot[28] is an adoption from the vehicle of the Greek Helios. The artistic representation of Sūrya in a quadriga at Bodh Gayā and elsewhere does not tally with the seven horsed chariot described in Indian texts, but it does with the Greek Helios as depicted in texts and in pictures.[29] Only the frontality of treatment in India is different, and this too originates in the frontal representation of the sun chariot in the south Russian steppes.[30] There is little direct evidence that the Bactrian Greeks attached any importance to the sun cult,

[23] *Ibid.*, p. 156, and P. Gardner ; *op. cit.*, pp. LX.f, 129f. also Cunningham in *Numismatic Chronicle*, 1892, p. 63 f.

[24] Philostratus : *Vita. Apoll.*, II, 20. Cf. A. Cunningham : *Ancient Geography of India*, I, 108.

[25] Hall's ed., IV, 4, 319.

[26] *Archaeolog. Survey of India, Annual Report*, 1908–09, p. 50 and Pl. XIIa.

[27] D. P. Pandey : *op. cit.*, has full list of *Sūrya* images.

[28] Abul Faraj (988 A.D.) refers to the Dīnikītiya worshippers of the sun in India who have an idol placed upon a cart supported by four horses. (*Kitab al Fihrist*, ed. G. Flugel, 1871, p. 346 f.)

[29] Eurip. *Phoen.* 3 ; Pausanias II. 3, 2. See Daremberg and Saglio : *Dictionnaire des Antiquites Grecques et Romaines*, IV, Pt. 2, p. 1379 f., and Pauly-Wissowa : *Real-Encyclopädie der classishen Altertumswissenschaft*, "Helios," pp. 88–90.

[30] M. Rostovtzeff : *Iranians and Greeks in South Russia*, p. 105, Pl. XII. 1.

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but the ruler Plato (c. 165 B.C.), son of Heliocles, has the god Helios riding a quadriga on his coin.[31]

There is every indication that the sun cult of Northern India was fostered by the Persians. Varāha Mihira[32] tells us that the installation and consecration of the images and temples of the sun should be caused to be made by the Magas, which implies that the Magas were special priests of the sun god. Al Beruni (tr. Sachau. I. P. 21) confirms that the Magian priests of Persia were called Magas. The Magas are first mentioned in Indian epigraphy in 861 A.D. when the text of the inscription is said to have been drawn up by the Maga Mātṛiravi, but already in c. 550 A.D. a manuscript found in Nepal gives an equal status to the Magas and Brāhmaṇas in the Kaliyuga.[33] According to the Bhaviṣya Purāṇa (139–141), the growth of Mazdaism caused a dispute between followers of the Mithra cult and the fire-worshippers, and the former took refuge in India and established themselves as Śākadvipa Brāhmaṇas. In the Samva-vijaya it is asked "where do they come from and for what reason, and how did they manage to establish themselves, and how did they obtain honour from high persons," and it is suggested that they "obtained domination by instilling fear of punishment in the minds of those who did not acknowledge their power."[34]

The Iranian angels Sraosha and Rashnu of the Avesta can be recognized in the doorkeepers of Mihira — Rajna and Srausha who were worshipped by the Magas in India according to the Bhaviṣya Purāṇa.[35]

The Bhaviṣya Purāṇa (ch. 139) says that a temple of the sun was constructed on the banks of the Chandrabhāgā (modern Chenab) and no local Brāhmaṇa would accept the office of regular priest of the temple. Magas were therefore called for who were special sun worshippers from Śākadvīpa. It further says that all Magas sprang from Jarasasta (Zarthustra) and wore girdles around their waist (Aivyāonghen or modern *Kusti*). Varāha Mihira (ch. 58) goes on to

[31] E. Herzfeld: *Archäologische Mitteilungen aus Iran*, II, 1930, pp. 130–1; and W. W. Tarn: *The Greeks in Bactria and India*, pp. 210–11.

[32] *Bṛhatsamhitā*, ch. 60, 19.

[33] D. R. Bhandarkar: "Foreign Elements in the Hindu Population," in *Indian Antiquary*, January 1911, p. 18.

[34] D. P. Pandey: *op. cit.*, p. 15.

[35] S. K. Hodivala (and M. P. Kharegat): *Parsis of Ancient India*, 1920, pp. viii f. and 90.

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say[36] that the idol of the sun worshipped in such temples should have his feet and legs enclosed or covered up to the knees, and that he should be dressed in the fashion prevalent in the north, and that he should be encircled by an Avyaṅga. Sun images in Gujerat temples do have such boots and a girdle round the waist with one end hanging down.[37] It has been observed that in the older Saurya system there is no allusion to a temple of the sun, and that this was further indicative of the cult and temple being introduced from Persia into N. India.[38] The earliest Sun Temple in India may be that of Jandial in Taxila,[39] and it is certainly related to a Persian Fire Temple in plan, including its *pradakṣiṇa patha*, or the passage which forms an ambulatory around the cella, a feature which we find already at the Ayadana (place of adoration) at Susa of Artaxerxes II (405–358 B.C.).[40] The ambulatory at Taxila may have been of Persian inspiration, but circumambulation itself is a widespread Indo-Aryan practice,[41] and even in native Indian texts the act is sometimes connected with a solar rite. In the Śatapatha Brāhmaṇa it is stated: "Sunwise this sacred work of ours shall be accomplished, and therefore they again walk round sunwise."[42] The possibility of the Jandial Temple being intended for a fire cult is strengthened by the deep foundation for a tower with steps at the back of the sanctuary on the summit of which a fire must have burned judging from Iranian analogies. The excavator believed that the Temple was contemporary with the wall of Sirkap which he attributed to the Graeco-Bactrian period. But if the wall was erected in c. 50 B.C., this would bring us closer to the date of the Parthian supremacy at Taxila (c. 50 B.C.–65 A.D.) which is the period assigned to the Temple by another writer.[43] There can at any rate be no doubt that Persian customs did prevail at Taxila

[36] D. P. Pandey: *Iconographical study of the Indian sun god*, 1939, p. 15.

[37] J. Burgess: *Architectural Antiquities of North Gujerat*, 1903, Pl. LVI.

[38] G. R. Bhandarkar: *Vaisnavism, Saivism and Minor Religious Systems*, 1913, pp. 153–5.

[39] J. Marshall: *Taxila*, 1951, I, p. 222f.

[40] Dieulafoy: *L'Acropole de Susa*, IV, Fig. 264.

[41] The *pradakshiṇa* corresponds to the Latin *dextratio* and the Celtic *deasil*, the circumambulation from right to left or from east to west (G. d'Alviella: in Hastings' *Encyclopaedia of Religion and Ethics*, 1910, III, p. 658).

[42] *Sacred Books of the East*, vol. XII, p. 442.

[43] B. Rowland: *The Art and Architecture of India*, 1953, p. 87.

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since Strabo (XV. 714) tells us that there, and nowhere else in India, Aristobulus saw corpses exposed to the vultures.[44] This practice of exposing the corpses of the dead on the hills is for example reported of the Persians by Wei-shu, c. 572.[45]

Coming now to the Sassanian period we can show a practically continuous contact with India over its whole span.

ARDASHIR (226–41 A.D.). Tabari says that after his crowning in 226 A.D. envoys from Kushan, Turan, and Makran came to acknowledge him suzerain.[46] This account of Ardashir's eastern conquests is held to be confirmed by the evidence of coins and by a bas-relief at Salmas.[47] The Indo-Muslim writer Ferishta claims that Ardashir reached as far as Sarhind in his march on India.[48] At any rate, as we have seen, it was in Ardashir's reign that Mani made his voyage to India for preaching his religion. It is suggested that Mani borrowed his belief in metempsychosis from Buddhism.[49]

SHAPUR I (241–72 A.D.). A relief carved on the cliff at Shahpur represents the triumph of a king (possibly Shapur I) over an Indian people.[50] It was at Shapur's court that Hindu books on grammar and horoscopy together with the Almagest of Ptolemy were included among the holy books. This is known from the 4th Book of the Pahlavi Denkart which was compiled in the 9th century A.D.[51] The Sassanian State Manual, the lost Ayinnameh, which survives in Arabic references, might in the same manner have drawn on the *Arthaśāstra* for certain features of military tactics advocated, although an opposite borrowing has been suggested.[52]

[44] From a slight indication in the Atharva Veda (XVIII. 2.34) and the Mahābhārata (Ādi Parvan, 90, paras 6, 17) it is maintained by some writers that the exposure of the dead may have been a prevalent native practice in India.

[45] K. Hori in *Spiegel Memorial Volume*, 1908, pp. 246–50.

[46] Noeldeke : *Geschichte der Perser und Araber aus . . .* Tabari, 1879, p. 17, n. 3.

[47] E. Herzfeld : *Paikuli*, I, p. 36.

[48] Elliot and Dowson : *History of India as told by its own historians*, VI, p. 55.

[49] Cf. Schaeder in *Gnomon*, IX, p. 349f ; A. V. W. Jackson in *Journal of the American Oriental Society*, vol. 45, p. 246f ; and A. Christensen : *L'Iran sous les Sassanides*, 1936, p.187.

[50] A. Christensen in *Cambridge Ancient History*, XII, p. 124.

[51] H. W. Bailey : *Zoroastrian Problems in the 9th Century Books*, 1943, p. 86; P. de Menasce : in *Journal Asiatique*, 237, 1949, pp. 1–3.

[52] F. M. Heichelheim : in *Economic History*, February 1938, pp. 5–6.

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HORMAZD I (272–73 A.D.). He was appointed governor of Khorasan (i.e., *vuzurg Kusan-sah*) and must have become a patron of Buddhism, for his silver drachm at Leningrad has on the reverse the king adoring the Buddha.[53]

PEROZ I (*after* 294 A.D.). Coins issued by the worshipper of Mazdah, the Kushanshah Peroz, figure the image of the Buddha.[54]

HORMAZD II (301–310 A.D.). According to Khondamir this ruler who called himself King of the Kushans married a daughter of the Kushan ruler of Kabul. The princess was sent to his court with costly presents and a splendid escort.[55] In confirmation of this it is pointed out that a coin of the late Kushan king Basana (c. 310 A.D.) combines a Kushan obverse with a Sassanian fire altar reverse as on a coin of Hormazd himself.[56] A copper coin of Hormazd bears on the reverse the god Śiva with the bull Nandi.[57] In the mutilated inscription of Kartēr Hormazd there is a reference to Brahmans and Shamans among other religions, and this leads to the suspicion that it may be an edict of toleration.[58] A fusion of cultures is evident in Eastern Iran and Afghanistan. A figure in Persian dress in a fresco at Kuh-i-Khwaja is seated in Bodhisattva fashion.[59] A wall painting at Dukhtar-e-Nushirwan north of Bamian shows a Sassanid prince seated on a throne.[60] Sassanian architectural influence appears in the Buddhist Bamian caves where carved in the rock are squinches and a cupola on an octagon. A remark of the Korean pilgrim Hwi Ch'ao in 727 A.D. suggests that the rulers of this region had continued to have Iranian affiliations.[61] In fact

[53] E. Herzfeld : *Kushano-Sassanian Coins*, 1930 (*Memoirs of the ASI*, no. 38), pp. 33–4.

[54] E. Herzfeld : *Kushano-Sassanian Coins*, 1930, p. 30f.

[55] Khondamir, tr. E. Rehatsak, II, p. 340 ; Cunningham in *Numismatic Chronicle*, 1893, pp. 169–70, 177.

[56] V. Smith : in *Journal of the Asiatic Society, Bengal*, LXVI, 1897, p. 5.

[57] E. Drouin : in *Le Muséon*, XIV, 1895, p. 158 ; E. Thomas in *Numismatic Chronicle*, 1852, "Unpublished coins of the Sassanidae."

[58] E. Herzfeld : *Archaeological History of Iran*, p. 101 ; Christensen in *Cambridge Ancient History*, XII, p. 112, n. 3.

[59] A. Stein : *Innermost Asia*, 1928, II, p. 913f.

[60] A. and Y. Godard and J. Hackin : *Les antiquités bouddhiques de Bamiyan*, 1928, p. 65f., Pl. 42.

[61] *Ibid.*, p. 83, Pls. XXVI, XXXI. See also J. Hackin and J. Carl : *Nouvelles recherches archéologiques a Bamian*, 1933, p. 75f.

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as far as Kao ch'ang a temple of Mani was served by Persian monks.[62]

VARHRAN III (293 A.D.) and *Narseh* (293–302 A.D.). The Paikuli inscription in Kurdistan records that Śaka Kṣatrapas from remote parts of India, such as the prince of Avantī, were retainers of Varhran III Sakanshah. At the end of this inscription Narseh is congratulated on his accession by Indian Śakas, including the Amokan tribe from Quetta district and the people of Saurashtra.[63]

SHAPUR II (309–79 A.D.). There is evidence for trade with India during his reign. Ammianus Marcellinus, who accompanied the Emperor Julian in his campaign against the Persians in 363 A.D., says (XIV. 3. 3) that in the city of Batné, situated not far from the east bank of the Euphrates, a great fair was held in September, to which flowed merchandise from India and from China.[64] A Pahlavi inscription from Persepolis written in 310–11 A.D. of Shapur II by his elder brother Shapur Sakanshah gives the latter the titles "minister of ministers of Sind, Sakastan and Tukharistan."[65] Another Persepolis inscription shows that the high judge of Kabul paid homage to Shapur.[66] In his attempt to capture Nisibis in 350 A.D., Shapur strengthened his army by a body of Indian allies, who were equipped with a large troupe of elephants.[67] Tabari says that Shapur II had an Indian doctor resident at Susa.

VARHRAN V (420–38 A.D.), better known as Bahram Gur. Under him, according to Tabari, a part of the Indian frontier belonged to Persia, and a deputy was kept over this territory who remitted to the exchequer of his government a specified yearly tribute.[68]

[62] E. Bretschneider: *Medieval Researches . . .*, 1888, I, p. 252.

[63] E. Herzfeld: *Paikuli*, I, pp. 42–3.

[64] The same is said by Hamza al-Isfahani (ed. Gottwaldt, p. 102) of the annual fair at Hira on the west bank of the same river relating to the 5th century A.D.

[65] E. Herzfeld: *Kushano-Sassanian Coins*, 1930, pp. 35–6.

[66] *Ibid.*, p. 36. Tabari had been cited to the effect that Shapur built cities in Sakistan and Sind (S. K. Hodivala: *Parsis of Ancient India*, p. 22).

[67] Julian: *Orat.*, II, pp. 115–116; G. Rawlinson: *The Seventh Great Oriental Monarchy*, 1876, p. 161.

[68] Tabari, tr. Zotenberg, II, p. 221; D. Price: *Essay toward the History of Arabia*, 1824, p. 182; G. Rawlinson (*The Seventh Great Oriental Monarchy*, 1876, p. 298) does not regard the ceding of Makran and Sind by the Indian king to Bahram in return for services against the Emperor of China (Tabari, II, pp. 124–5) as historical.

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Mediaeval Muslim writers have reported that Bahram visited the Kingdom of Kanauj under a pseudonym. Who was the ruler there is not quite certain. Masudi (947 A.D.) says that it was Sabarmah, and Firdausi (c. 1000 A.D.) says that it was Shangal. After accomplishing feats of bravery and receiving the King of Kanauj's daughter, Bahram returned to Iran. Firdausi goes on to say that Shangal returned the visit and was accompanied by the rulers of Kabul, Hind, Sind, Sandal, Jandal, Kashmir and Multan.[69] Moreover, according to Firdausi, Bahram wrote to Shangal asking him to select 10,000 Luris of the gipsy tribe, both male and female, who were skilful on the harp,[70] and have them sent to him. The Indian ruler complied and ordered the gipsies to prepare their harps and "stretch the silken chords."[71] Thaalibi adds that the 12,000 musicians that were sent were distributed by Bahram in all the cities of his kingdom.[72] The term *kousans* used in the context would seem to be the Pahlavi word referring to "musicians," but a later writer, al Ahri (c. 1360 A.D.), says "some singers" came from India.[73] Masudi, incidentally, has an interesting comment on Indian music.[74] He says that Indians "frequently hear songs and musical performances, and they have various sorts of musical instruments which produce on man all shades of impressions between laughing and crying . . . ."

PEROZ II (471–86 A.D.). Coins imitating his, issued by the Hun invaders of India, have been found in great numbers in Marwar. The Sassanian type thus introduced into India is claimed to have become "predominant in the coinages of Gujerat, Rajputana and in the Gangetic doab during probably the following 3 or 4 hundred years."[75] These invaders who came in c. 460 A.D. were, incidentally, the Ephthalites, or White Huns of Tartar origin from the Oxus region. One writer believes that the Sassanian king Kobad (c. 499 A.D.), while assisting the Huns, lost Sind to the Indian King

[69] *The Shahnama of Firdausi*, tr. A. G. and E. Warner, VII, pp. 140–1, and 112f.

[70] Translated alternatively as "luth" by J. Mohl: *Le Livre des Rois*, 1877, VI, p. 61.

[71] Warner, *op. cit.*, VII, p. 149.

[72] *Histoire des Rois des Perses*, tr. Zotenberg, pp. 566–7.

[73] J. B. Van Loon: *Tarikh i Shaikh Uwais*, 1954, p. 27.

[74] A. Sprenger: *El Masudi's Historical Encyclopaedia*, "Meadows of Gold . . .", 1841, p. 186.

[75] Rapson: *Indian Coins*, p. 29.

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Yaśodharman.[76] This is interpreted from Kālidāsa's play *Raghu Vaṁśa* (IV. 60), where Raghu sets out by an inland route to conquer the *Pārasīkas*, that is to say, according to the commentator, Mlechha Rājas living on the banks of the River Sindhu or Indus. At least we can say that the Indian word for Persia — Pārasīka (from Pars, modern Fars) was in use in the 5th century A.D.

KHUSRU I ANOSHIRVAN (531–79). Masudi (ii. 203) says that this king had the game of chess and the animal tales Kalila and Dimna imported from India. This is repeated by Hamdallah Mustawfi (1330 A.D.)[77] One of the earliest sources on the origin of chess is a Pahlavi treatise, possibly of the 7th century A.D., which relates how an Indian king, Dewasārm (Devaśarman ?) sent an embassy to Khusru I with the game of chess (*catrang*), invented by him, asking at the same time if it could be understood there. The explanation of the chess, as a game of war, was furnished by Khusru's minister, who then in turn invents and sends to the Indian king the game of Newardasher (Nard), with an astrological implication.[78] Firdausi says that it was the King of Kanauj who sent the game of chess (*Shatranj*, from Sanskrit *caturaṅga*, meaning "four membered army": in the Indian context infantry, cavalry, elephants and chariots), and that it was invented in India to console a queen for the loss of her son.[79] While Masudi says that chess was invented in India in the reign of Balhit,[80] Ibn Khallikan claims that it was invented by Sissah Ibn Dahir for the amusement of King Shihram.[81] But there is agreement on one point : Masudi says that stratagems of war were worked out upon it and that this helped materially in preserving the empire, and Ibn Khallikan contends that chess boards were placed in temples to familiarize people with the art of war. The earliest Indian reference to chess is later than Khusru I, occurring as it does in the *Harsacarita* of Bāṇa in the early 7th century A.D., and referring to the court of Śrīharṣa the king of Kānyakubja supreme ruler of Northern India (610–650 A.D.).[82] It

[76] Hoernle cited by S. K. Hodivala : *op. cit.*, p. 7.

[77] *Tarikh i Guzida*, tr. E. G. Browne, II, pp. 39–40.

[78] tr. D. Peshotan, 1885, Bombay ; Noeldeke : in *Sitzungsberichte der Wieren Akademie*, 1892, pp. 20–6.

[79] tr. Mohl, VI, pp. 353–6.

[80] A. Sprenger : *op. cit.*, pp. 171–2.

[81] Ibn Khallikan, tr. de Slane, III, p. 68f.

[82] A. A. Macdonnel : "The Origin and Early History of Chess," in *Journal of the Asiatic Society*, 1898, p. 125.

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is in the same work by this author (IV. p. 143 ; VII. p. 206) that we encounter a Sassanian Pahlavi loan word *stavaraka*, which is, for instance, found in the Persian *Arda Viraf* (XIV. 14), a word which the Arabs had also borrowed in their *istabraq* ("thick silk brocade"). *Stavaraka* was a cloth studded with clusters of pearls, and kings had tunics or canopies made of it ;[83] the borrowing of the word would seem to suggest that this fashion of royal attire was introduced from Iran into India. Bāṇa further states that the stable of King Harṣa-vardhana was filled with horses from Persia.[84]

The story of the bringing of the animal tales from India is as follows : Barzoe is selected by Anoshirvan's minister to procure a book containing every kind of instruction, which by hearsay was believed to exist in India in the library of the king. Through an Indian acquaintance Barzoe discovers not only this book but also other works of great value. He returns home with the Pahlavi translation and reads the book to the assembled court who acclaim him. As reward, he wishes his biography to be placed at the head of the work, including a description of how he journeyed to India for the purpose of extending his knowledge in chemistry and medicine.[85] Al Thaalibi actually says that Barzoe was one of the 120 Greek, Indian and Persian physicians of Anoshirvan.[86] According to Thaalibi and Firdausi the physician Barzoe reads in some book that in India are high mountains, on which certain trees and plants grow out of which an elixir can be made for raising the dead. In India, the sages interpret the passage he has read as allegorical. He is impressed, and sets about translating their books of instruction and wisdom, one of which is the Kalila and Dimna.[87] The name of the Indian king is stated to be Dīshalm (or Dabishlim by Masudi) and his preceptor is given as Yankartā. It is, of course, common knowledge that the Arabic translation of Barzoe's version by Abdullah Ibn al Mukaffa (c. 750 A.D.) was the actual one which

[83] V. S. Agrawala : in *Journal of the Uttar Pradesh Historical Society*, XXIII, Pts. 1–2, 1950, pp. 160–1.

[84] *Harṣa-Carita*, tr. Cowell and Thomas, p. 50, Harsha-vardhana (606–48) and Varāhamihira are both claimed to have been Mag Brahmin sun worshippers. (F. J. Dawar : *Iran and its Culture*, 1953, p. 172.)

[85] I. G. N. Keith-Falconer : *Kalilah and Dimnah or the Fables of Bidpai*, 1885, p. XXIf.

[86] *Histoire des Rois des Perses*, tr. Zotenberg, p. 629f.

[87] Keith-Falconer, *op. cit.*, p. XXIII.

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was instrumental in the stories being transmitted to Europe, when direct translations were made into Syrian, Greek, Persian, Hebrew and Spanish.[88]

Although Indian envoys are not included among those at the Court of Chosroes as listed by Tabari, the historian Ibn Miskawaih, citing an alleged autobiography of Anoshirvan, does maintain that this ruler received in one day ambassadors from the rulers of Rome, Kabul, Serendib (Ceylon), etc.[89] Moreover Masudi refers to Chosroes making peace pacts with the kings of India and Sind,[90] and lists the Indian gifts as consisting of camphor, aloes, a ruby cup filled with pearls, a slave seven cubits tall, and a carpet of snake skin.[91] As far as Ceylon is concerned, Cosmas has claimed in 535 A.D., that the Christian priests there were of Persian stock,[92] and beside this we must place the statement of Tabari that Chosroes had sent a military expedition there after 570 A.D.,[93] in addition to regaining for Persia the territories of Sind and Kabulistan.[94] Finally the Jaina Prākṛta tales, evidently of the 6th century A.D., refer to a Persian merchant sailing to a place called Bennayada in a large ship laden with sandalwood, aloes, and other wares.[95]

KHUSRU II PARVIZ (590–627 A.D.). Tabari records that Khusru Parviz received an embassy from the King Prmēsha in 625 A.D.[96] From the evidence of inscriptions we know that Parameśa or Parameśvara was the second name of Pulakeśin II of the Cālukyan dynasty of the Deccan. Together with the gifts was a letter addressed to one of the Sassanid princes, marked "private," and containing a prophecy of his election to the throne within a space of two years. This prince, Sheroe, is held to have been Kobad II, and his gifts included an elephant, a sword, a white falcon, and a gold

[88] *Ibid.*, p. XIV.

[89] A. M. Honeyman: *The Mission of Burzoe in the Arabic Kalila and Dimnah*, 1936, p. 33.

[90] *Prairies d'Or*: tr. B. de Meynard, II, p. 200. [91] *Ibid.*, pp. 201–2.

[92] J. W. McCrindle: *The Christian topography of Cosmas*, pp. 118–9, 365.

[93] Noeldeke: *Geschichte der Perser und Araber aus der Arabischen Chronik des Tabari*, 1879, p. 250; Hamza Isfahani credits Nushirwan with the conquest of Ceylon (*Annals*, ed. Gottwaldt, 1844, p. 58.)

[94] Noeldeke: p. 156.

[95] Meyer: *Hindu Tales*, pp. 216–7; R. N. Saletore: *Life in the Gupta Age*, 1943, p. 378.

[96] Noeldeke, *op. cit.*, pp. 371–2, and Tabari. ed. de Goeje, II, p. 1052.

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brocade.[97] The gold and silver coins of Khusru Parviz stamped with his image and struck at Multan in 610 and in 626 A.D.[98] would seem to suggest that at this time Sind was under the rule of Sassanid Persia. Similarly a coin of Śri-Vāsudeva dated 627 A.D., with a bilingual inscription in Nāgarī and Pahlavi, would seem to suggest the rule of a Persian satrap. Vāsudeva is called in Pahlavi, King of Bahman (Bahmanvasi or Brahminabad) Multan, Tukān (Punjab), Zabulistan, and Sapandalaksān (perhaps Rajputana).[99] The coins of Shahi Tigin are similar and bear the title "King of India and Persia."[100] At last, after centuries of contact with foreigners, in the reign of Khusru, the Indians took some interest in them and represented them in a fresco in Cave I at Ajanta. The scene is of Persians with sugar loaf hats, close fitting tunics and flying scarves, seated cross-legged on sofas drinking from bowls and attended by harem girls with pitchers.[101] Opinions differ as to whether the painting is a product of the embassy to Pulakeśin or to Harṣavardhana, or whether Khusru is himself here represented, or even if there are historical portraits here at all.[102] After the fall of the Sassanians in Iran, some continued to reside there freely pursuing their own faith,[103] others migrated to India,[104] where they established a community of Pārsīs which has kept its individuality to this day.

[97] Cf. M. S. Dimand : in *Archaeologia Orientalia in Memoriam Ernst Herzfeld*, 1952, p. 67.

[98] Rapson : *Indian Coins*, pp. 30, 109 ; F. D. J. Paruck : *Sasanian Coins*, 1924, p. 125.

[99] Rapson : *op. cit.*, p. 30. [100] *Ibid.*, p. 31.

[101] J. Fergusson and J. Burgess : *The Cave Temples of India*, 1880, no. 6 ; Griffiths : *The Paintings of the Buddhist cave temples of Ajanta*, 1896, Pls. 94, iv ; 95, iv.

[102] See K. A. N. Sastri : *Foreign Notices of South India*, 1939, p. 9 ; B. Ghose : in *Journal of the Bihar Research Society*, XXX, p. 1f ; and R. C. Majumdar : in *Journal of Indian History*, IV, Pt. 2, 1926, pp. 29–33.

[103] Ibn Haukal wrote as late as the middle of the 10th century that the books of the fireworshippers (Guebres), their temples, and their ceremonies and customs still continued among the people of Pars. (tr. Ouseley, p. 116.)

[104] It is claimed that they built their first temple at Sanjan on the Gujerat Coast, c. 721 A.D. (S. K. Hodivala : *Studies in Parsi History*, pp. 99–106.)

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Chapter VIII

INDIA AND THE MUSLIMS PRIOR TO PERMANENT CONQUEST

Muslim military design on India did not commence with a concerted plan organized on a vast scale. It was carried on over a number of years through relatively small forays. This is evident from the clear account of Baladhuri (d. 892–3).[1]

The first move came only four years after the death of Muhammad, the Prophet of Islam. Caliph Omar (634–44) had appointed Usman ibn Abul Asi governor of Bahrein and Oman in 636 A.D. This governor despatched an army to Tana (near Bombay), and sent his brother Hakam with a force to Barauz (Broach), and another brother, Mughira, to the Bay of Debal (at the mouth of the Indus). Baladhuri does not relate the fate of the first two, but claims that the latter met and defeated the enemy. When the Caliph came to hear of the expedition he was angry, and threatened that if the lives of Muslims had been lost in the venture an equal number of the tribe of Usman would have to forfeit theirs. Apparently Omar was irked not by the attempted conquest, but by the foolhardy and pointless nature of the mission, and also because he was opposed to overseas naval operations.[2]

Curiosity had at any rate been roused and the next Caliph, Usman (644–56), ordered his governor in Iraq to send a person to the confines of Hind to bring back information. The emissary returned and gave a pessimistic account of the prospects. He said: "Water is scarce, the fruits are poor, and the robbers are bold. If few troops are sent there they will be slain; if many, they will starve." As a result of this report the Caliph desisted from sending an expedition.

In 659 one Haras obtained permission from Caliph Ali (656–61) to go to the same frontier. He plundered and took captives, but

[1] H. M. Elliot and Dowson: *The History of India as told by its own historians*, I, p. 116f.; and *The Origins of the Islamic State*, tr. F. C. Murgotten, II, 1924, p. 209f.

[2] Nabi Bakhsh: "The Probable date of the first Arab expedition to India," in *Islamic Culture*, July 1946, pp. 264–5.

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eventually all but a few of his contingent were slain at Kīkān (Bolan Pass) in 662.

In 664 under Muawiya (661–80) one Muhallab advanced with a force as far as Alahwar (Lahore), but again he and his men were annihilated. Nevertheless Makran was conquered under Muawiya by a person by the name of Sinan.

Hajjaj became the Governor of Iraq (695–714), and in the reign of the Omayyad Caliph al Walid (705–15) occurred the incident which was to lead to the conquest of Sind. A shipload of Muslim girls, the orphan daughters of merchants who had died in Ceylon, was being sent as a present to Hajjaj by the Singhalese ruler when it was intercepted by the pirates of Sind. As a reprisal, Hajjaj sent two successive raiders to Daibul; they met with swift disaster. The 17-year-old Muhammad ibn al Qasim was given charge of the frontier in 711–12. He marched to Daibul and was there reinforced by ships laden with men, weapons and supplies. He had catapults set up manned by 500 men, and dug an entrenchment. Daher's governor was defeated.[3] Muhammad built a mosque, and settled 4000 colonists there. Muhammad then conquered Brahminabad, Alor and Multan. The destruction to life and property was deplorable, as in any war, but in the midst of this, Islamic influence made itself felt in the surrender terms. At Alor, for example, lives were spared and temples were not touched. Toleration of belief was now officially extended to the Hindus. Muhammad Qasim announced that "Temples (*budd*) shall be regarded in the same light as the churches of the Christians, the synagogues of the Jews, and the Fire Temples of the Magians." When Qasim was recalled by order of the new Caliph (Sulaiman) and made prisoner, Baladhuri claims that the people of Hind wept for him and preserved his likeness at Kiraj.

The pretext for the invasion of Sind sounds very much like a fable, but it is by no means surprising that there were Muslim orphans in Ceylon at the time. Vajrabodhi, who arrived in Ceylon in 717, saw 35 Persian ships come to trade in precious stones. According to him, they then sailed to Palembang, where the ships were scattered by a tempest and only one survived.[4] If the sailor

[3] The 500 Arabs of Muhammad Allafi who were in the service of Daher refused to fight against their co-religionists (Chach-nama, I, 127).

[4] G. Ferrand: *Relations de Voyages et Textes Geographiques relatifs a l'Extreme-Orient*, II, 1914, p. 637.

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Buzurg bin Shahriyar is to be believed, a Singhalese representative was sent from Sarandip to enquire about Islam soon after its inception. The Caliph Omar gave him details, and this was why the people of Sarandip (Ceylon) had kindly feelings toward Muslims. Ferishta, however, goes too far when he claims that the Rāja himself embraced Islam in 660 A.D.[5] Muslims no doubt penetrated to the Far East at an early date. The Prophet's Uncle is said to have died at Canton.[6] Al-Dimishqi states that Islam reached Indo-China in the days of the third Caliph, Usman.[7] Hwi Ch'ao work (727), found in a rock chamber at Tun-huang in 1908, says that the Ta-shi (Arabs) sailed to Ceylon, where they got precious stones, and to the K'un-lun country (Malaya) to fetch gold, and to Canton for silk piece goods and similar ware.[8] Muslims even went as far as Korea.[9] A settlement of Muslims in the Far East was to follow shortly afterwards. Marvazi (c. 1120) claims that before 749 some Shiah Muslims fled from persecution in Khurassan and had settled in an island (Hainan ?) in one of the large rivers of China, opposite a port, and there served as middlemen in the trade between the Chinese and foreigners.[10] In 758 the Arabs (Ta-shi) and Persians (Po-sse) sacked and burnt the city of Canton and went back by sea.[11] Although Chinese annals refer to the Malayans also as Po-sse, the identity of the raiders cannot be doubted, since they are coupled with the Arabs in the passage.[12] Vengeance was to follow when, in 878, according to Abu Zaid of Siraf, Baiku marched into Cansu (Canton) and massacred 120,000 Muslims, Jews, Christians, and Parsee traders, a number known because of Chinese precision in keeping accounts of citizens.[13] After this, according to Masudi, the

[5] S. Nadvi : in *Islamic Culture*, July 1934, pp. 478–9.

[6] J. Edkins : in *Journal of the Royal Asiatic Society*, XVIII, 1886, p. 3.

[7] Nukhbat al Dahr, St. Petersburg, 1865, p. 168 ; cited by S. M. Yusuf : "Al Ranj," in *Islamic Culture*, XXIX, No. 2, 1955, pp. 89–90.

[8] F. Hirth : in *Journal of the American Oriental Society*, 33, 1913, p. 202f.

[9] G. W. Chung and G. F. Hourani : in *Journal of the American Oriental Society*, December 1938.

[10] G. F. Hourani : *Arab seafaring in the Indian Ocean*, 1951, p. 63.

[11] E. Bretschneider : *On the Knowledge possessed by the Ancient Chinese of the Arabs*, 1871, p. 10.

[12] Hadi Hasan : *A history of Persian Navigation*, 1928, p. 99.

[13] M. Reinaud : *Relation des voyages faits par les Arabes et les Persans dans l'Inde et a la Chine dans la 9e siecle*, 1845, II, p. 63.

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ships of Basra and China met at Kalah (in Malacca).[14] But Chinese ships may have ventured further West. In one of the Chinese legends of the lion-prince Simhala, the boat in which the daughter of the lion was cast away was driven by the winds westwards into the Persian Gulf, where she landed and founded a colony in the country of the Western Woman. This legend is contained in Hiuen Tsang's travels in India, 629–45 A.D.[15] It is in fact known that later, Chinese craftsmen from the Wei river were settled in the Abbasid capital of Kufa (c. 750 A.D.) where they were engaged in weaving light silks, while others were painters or gold- and silver-smiths.[16]

According to Arab sources, Indian ships used to come up to the head of the Persian Gulf prior to Islam. Ibn Rustah says they used to sail up the Tigris as far as Madain,[17] the Sassanid capital of Ctesiphon. Tabari claims that the Sassanids had to fortify Ubullah as a bulwark against attacks by Indian fleets.[18] Marauding Indian ships are at any rate heard of in Islamic times. Al Athir records that in 834/5 a fleet of Jats came up the Tigris, causing havoc, and it took all the forces of the Caliph to combat them.[19] The Indian Zutt tribes had been settled by al Hajjaj in the marshes of lower Mesopotamia, together with their buffalo herds, and in the reign of Mamun (813–33) they were a considerable nuisance to Iraq, in that they disrupted trade and communication in the south. It was left to Mutasim (833–42) to subdue them and remove them to North Syria.[20]

Apart from the Arab trade relations with China, there were the official embassies, of which we have some dated reports through Chinese archives. Again it would seem the Arabs were only continuing a practice begun in Sassanid times. In the period of Shön-kui (516–28) Persia sent to the Chinese court an ambassador with tribute and message from Kavadh or Kobad I (488–531), and

[14] *Murudj adh Dahab*, ed. de Meynard, I, p. 308.

[15] Beal: *Buddhist Records of the Western World*. 1884. II. p. 240.

[16] P. Pelliot: "Des artisans Chinois a la Capitale Abbaside en 751–762," in *T'oung Pao*, 1928, 26, p. 110.

[17] G. F. Hourani: *Arab Seafaring* . . . , 1951, p. 41.

[18] ed. Kosegarten, II, pp. 8, 10; M. Reinaud: *op. cit.*, p. xxxvii.

[19] Kamel al Tawarikh, I, fol. 85, cited by Reinaud: in *Journal Asiatique*, 1845, p. 175.

[20] Saleh El-Ali: in *Encyclopaedia of Islam*, new ed., I, fasc. 18, 1959, pp. 1094, 1096.

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according to the source, "from this time onward tribute missions were sent every year."[21] This is not the proper place to more than mention some of the reported diplomatic exchanges relating to the Arab Empire and China. Chinese records mention embassies from the Caliphs in 651 (from Usman), 713, 726, 756 (this from Mansur together with contingents of troops to help the Emperor), and in 798 (this from Harun for the purpose of co-ordinating against the Tibetans). The Chinese Emperor received Ibn Wahab, a Quraishi from Basra, in 872, and interviewed an Arabian captain in 995. Moreover 20 embassies, mostly mercantile, are recorded during the Sung Dynasty (960–1280),[22] including a Samanid embassy for 984, and Seljuk embassies for 1081 and 1091.[23] One Arab author, Qadi Rashid, describes in some detail the experiences of an embassy from China in 938 requesting 27 years arrears in taxes, and how eventually it failed to reach the capital, Baghdad.[24]

Our purpose in interjecting this brief notice of Chinese relations with the Muslim world is only to give an indication of the extent of intercourse between such distant realms, and consequently to bring out how much closer the relations must have been between the Muslims and India, which is, of course, our proper concern here. The Sind colony maintained an independent existence until the end of the 10th century, and its principal centres were Daibul, Mansura and Multan. But while this is well known, the peaceful encroachment by Muslims on Hindu India in the same period has not been systematically examined. There is evidence for the establishment of large Muslim colonies in west coast ports in the 9th and 10th centuries. Sulaiman (c. 851), the earliest of the Arab travellers to India whose account survives, claims that the stability of the state of Balhara is due solely to "the favour shown to the Arabs. In fact, among all the kings there is no one to be found who is so partial to the Arabs as the prince and people of Balhara." Balhara, he says,

[21] K. Hori: "A Chinese Account of Persia in the 6th Century," in *Spiegel Memorial Volume*, 1908, pp. 246–50.

[22] E. Bretschneider: *op. cit.*, 1871, pp. 8–15.

[23] F. Hirth: *China and the Roman Orient*, p. 298; F. Hirth and W. W. Rockhill: *Chao Ju-Kua*, 1911; E. H. Schafer: *Iranian Merchants in Thang Dynasty Tales*, California, 1951, p. 403; J. Needham: *Science and Civilization in China*, 1954, I, p. 217.

[24] *Kitāb al dhakhā'ir wat-tuhaf*, ed. M. Hamidullah, Kuwait, 1959, p. 139. I owe this reference to the late Prof. D. S. Rice.

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is not a proper name, but an appellative common to all these kings.[25] At the time Masudi (943) visited India in 915, the Balhara had developed an animosity for the Muslims, but the neighbouring kingdom of at-Takin was very friendly with them. Masudi says that the peace of the Muslims was not disturbed in India and that Islam flourished. The mosques of the Muslims were large and splendid. At Saymūr in the country of Lar, a dependence of Balhara, there were at this time about 10,000 Muslim traders from Iraq and the Persian Gulf as well as the *bayassars* or Muslims born in India.[26] None of these, it must be noted, included converts, for as Sulaiman says in his time he knew neither Indians nor Chinese who had accepted Islam or spoke Arabic. Istakhri (c. 951) next says of Balhara, "It is a land of infidels, but there are Muslims in its cities, and none but Muslims rule over them. There are Jami Masjids there."[27] Balhara is undoubtedly a corruption of the Sanskrit Vallabharāja (supreme king). This title was assumed by the Cālukyas in the 6th century A.D., adopted by their successors the Rāṣṭrakūṭas during their rule (747–973), and then again resumed by the Cālukyas who ousted their rivals.[28] We now have independent testimony from India of the role of Arab settlers in the region and their relationship with the native ruler. The information derives from three copper plates with Sanskrit inscriptions found at the village of Chinchani in the Thana district. The inscription states that the Tājika (Arab) Madhumati (Muhammad) had become ruler of the whole Saṁyāna (modern Sanjan) by favour of the Rāṣṭrakūṭa king Kṛṣṇa II, and had defeated all the rulers of the coastal countries and established his outposts therein. The immediate subject of the inscription, the Arab Sugatipa (Subakta ?), is stated to have donated a village and some land to the temple of a goddess

[25] E. Renaudot: *Ancient Account of India and China by two Mohammedan travellers*, 1733, p. 15.

[26] *Murudj adh dhahab*, I, p. 382f, II, p. 85–6; M. Reinaud: *Mémoire geographique . . . sur l'Inde*, 1849, p. 220.

[27] H. M. Elliot: *The History of India . . .*, I, p. 27. Ibn Haukal had observed that however small the Muslim minority in foreign cities, they could not "tolerate the exercise of authority, nor the imposition of punishment, nor the testimony of a witness except by Muslims." (*Kitabal-Masalik wal-Mamalik. ed. de Goeje.*

[28] See R. G. Bhandarkar: *Early History of the Deccan*, 3rd ed., and A. S. Altekar: *The Rāṣṭrakūṭas and their Times.*

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at Saṁyāna by permission of his overlord King Indra III in 926 A.D., in addition to providing a charitable feeding house in that town, and floating wooden platforms for crossing large streams in that district.[29] From this we not only obtain the information that the Arabs were looked upon favourably by the Balhara, but also that they had been permitted to establish petty principalities (where as Istakhri says "none but Muslims rule over them"), and had contributed to public works, and even to enhancing the property of the local temple. From Ibn Haukal (976) we obtain the intimate touch that Muslim rulers dress in the same manner as the infidels, with pendants in their ears, though the original stock of Muslims who came as conquerors dress like Iraqis.[30] But while the Muslims had begun to adopt Indian ways, it must not be imagined that the Hindus who came in contact with them did likewise, for they had a strong aversion to mingling with foreigners (*mlecchas*), as al Beruni (1032) expressly testifies.[31] Muslims on the other hand had come to appreciate the sterling qualities of the natives. Edrisi (1154) describes the Indians as being "naturally inclined to justice, and they never depart from it in their actions. Their good faith, honesty and fidelity to their engagements are well known, and they are so renowned for these qualities that people flock to their country from every side."[32] Moreover al-Jahiz of Basra (d 869 A.D.) had described the inhabitants of India as having beauty, grace, elegance and fragrance, and he praises their medicine, art, music and cuisine.[33]

The various settlements of the Muslims up and down the West Coast may be plotted utilizing the works of Arab geographers, although the places mentioned by them are not always possible to identify.[34] A mosque is certain indication of a fair sized colony. It was Muhammad Qasim who built the first mosque in India, at Daibul and Ar-Rûr (Alor).[35] Ibn Haukal (976) refers to mosques at

[29] V. V. Mirashi : in *J. N. Banerjea Volume*, 1960, p. 96f.

[30] Elliot : *op. cit.*, I, pp. 38–9 ; Ouseley : *Oriental geography . . .* , pp. 146–8.

[31] Alberuni's India, tr. E. C. Sachau, 1888, I, pp. 19–20.

[32] S. M. H. Nainar : *Arab Geographers' knowledge of Southern India*, 1942, p. 97.

[33] Rasail of al-Jahiz, ed. 1324 A.D., pp. 81–2 ; M. Z. Siddiqi : *Studies in Arabic and Persian Medical Literature*, 1959, Calcutta, p. 32.

[34] For a recent attempt see S. Maqbul Ahmad : *Al Sharif al Idrisi : Indian and the Neighbouring Territories*, Leiden, 1960.

[35] Baladhuri : tr. Murgotten, *op. cit.*, pp. 218, 221.

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Seidan, Meimoun, Multan, and Heidour, and to a Jami Masjid at Cambay, where Muslim precepts were openly observed and the call to prayer openly shouted.[36] Muhammad Ufi (1211) says the mosque and minaret at Cambay were restored with four towers having golden cupolas.[37] In addition to Kanbāya, Istakhri (950) claims that there were cathedral mosques at Qāmuhul, Sandān, and Saymūr where Muslim precepts were openly observed.[38] If Yaqut (d. 1229), who bases his information on Abu Dulaf Miśar, is to be believed, there were not only mosques at Saymūr but also synagogues, churches and fire temples.[39] Dimishqi (c. 1325) refers to cathedral mosques at Sindabur and Tanash,[40] while Ibn Battuta (c. 1355) refers to mosques at Gogah (near Bhavnagar), at Chandapur, near Goa ("a stately mosque equalling those of Baghdad"), at Paknur (in Madras), at Hilli, near Cannanore ("whose treasury serves as stipends for students"), at Janpatam, at Budh Patam (built by a converted Muslim Raja of the first century Hegira), at Findarinah, north of Calicut (three mosques and a spacious Jami facing sea), and at Kolam, that is Quilon ("the Jami mosque here is good and handsome").[41] None of the mosques listed above exist, but a striking confirmation of the building activities of early Muslim traders and settlers has been found in the Colombo Cemetery through a Kufic inscription. This states that in 337 A.H. (948 A.D.) Khalid ibn Abu Bakaya completed in the vicinity "a security for religion with (other) conveniences,"[42] which we take to mean a mosque with dependencies.

Hindu-Muslim relations must have suffered a terrible set-back after the Ghaznavid incursions into India. These invasions were commenced by Subuktegin after his enthronement in 977 ; and he was easily able to check the retaliatory drive of Jaipal, of the Hindushahi Dynasty (c. 986). Then, in the year 1000, Mahmud made his first expedition into India, and this pattern was kept up successively each year until 1027.[43] The contemporary al Beruni

[36] W. Ouseley : *The Oriental Geography of Ibn Haukal*, 1800, p. 146f.
[37] H. M. Elliot and Dowson : *op. cit.*, II, p. 164.
[38] S. M. H. Nainar : *op. cit.*, p. 66.
[39] S. M. H. Nainar : *op. cit.*, p. 71. [40] *Ibid.*, pp. 75, 81.
[41] Ibn Battuta : *Travels in Asia and Africa*, tr. H. A. R. Gibb, 1939, p. 234.
[42] *Transactions of the Royal Asiatic Society*, I, 1827, pp. 545–8 and 553.
[43] See Muhammad Nazim : *The Life and Times of Sultan Mahmud of Ghazna*, 1931, pp. 86–122.

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(973–1048) writes: "Mahmud utterly ruined the prosperity of the country, and performed there wonderful exploits, by which the Hindus became like atoms of dust scattered in all directions, and like a tale of old in the mouth of the people."[44] We must assume that, little by little, trade relations were re-established. According to Marvazi, Arabian merchants traded with the Raja of Kanauj in the 11th century,[45] although al Beruni had said that Muslim merchants did not penetrate beyond Rajawari, near the mountain Kularjak in Kashmir.[46] After that Indian merchants were to be seen at Alexandria, according to Benjamin of Tudela (1160–74),[47] and, it seems, a Jewish merchant from Tunisia ran a bronze factory in India until 1149.[48] Maqrizi reports an embassy from the king of Ceylon to the Sultan of Egypt in 1283.[49] Marco Polo says in 1300 that when they have need of soldiers in Seilan they get Saracen troops from foreign parts.[50] He also reports that Arabian horses were "greatly in demand in Southern India and were shipped there from Aden and Hurmuz." He claims that every year 2000 horses were imported by the five Rajas and that each horse cost 500 dinars.[51] The Mongol historian Rashidud-din (d. 1318) confirms this import of great number of horses from the Persian Gulf to the Malabar, but has different statistics.[52]

Despite the silence of the records, it is impossible to believe that Mahmud's impact on India left no vestige or trace. In a detailed study elsewhere we shall show that temples built by Jains shortly after this event are strongly influenced by Islamic architectural ideas. The specific building in question where these influences are manifest is the Dilawara Temple in Abu, begun (1032) a few years after the invasion of these parts by Mahmud. The specific features which, we contend, are directly modelled on or are inspired by Muslim architecture and which have no antecedents in Indian art[52a]

[44] Alberuni's India: tr. E. C. Sachau, 1888, I, p. 22.
[45] Marvazi: tr. V. Minorsky, 1942, p. 47.
[46] Alberuni's India: *op. cit.*, I, p. 208.
[47] M. Komroff: *Contemporaries of Marco Polo*, pp. 304, 318.
[48] S. D. Goitein: in *Journal of the American Oriental Society*, vol. 80, no. 2, 1960, p. 92. [49] Howorth: in *Indian Antiquary*, 1885, p. 61.
[50] H. H. Yule: *Marco Polo*, II, p. 314. [51] *Ibid.*, II, pp. 325–6.
[52] H. M. Elliot and J. Dowson: *op. cit.*, I, p. 69. (He has "10,000 horses each costing 220 gold dinars".) [52a] For detailed study see the author's article in the *Indo-Iranica*, XV, 4, 1962.

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are: (*i*) Domes instead of śikharas, (*ii*) columns bearing domes, (*iii*) brackets in the form of trifoliates which serve as mock arches, (*iv*) *mukarnas* (stalactite) transitional devices, (*v*) geometric treatment of coffered ceiling with central pendants, (*vi*) successive use of star-shaped patterns, (*vii*) linear lace-like style. Should we succeed in establishing some at least of these points then it will have to be admitted that one of the greatest masterpieces of Indian architecture could not have been possible but for a strong wave of foreign influence.

In the days before the establishment of the Delhi Sultanate (1206) and the subsequent systematic conquest of India, the greatest measure of influence was not from the Islamic world to India but the very reverse. We shall deal with it here in order to show how the times had changed, and how a mature India was able to contribute to apt pupils who came to her eager to learn.

Abu Zaid wrote (950) that the Chinese Emperor told Ibn Wahab that he regarded the King of Hind as the king of wisdom for science originated from there.[53] Similarly, Masudi who visited India in 915, begins his account of the land by observing the unanimity of historians in acclaiming the Hindus to have been "in the most ancient times that portion of the human race which enjoyed the benefits of peace and wisdom."[54] Long before this was written Indian sciences had made an impact on the Muslim world. In 771, in the reign of the Caliph al Mansur, an Indian astronomer visited Baghdad (according to al Beruni, as a member of a political mission from Sind),[55] and brought with him "tables of the equations of planets according to the mean motions, with observations relative to both solar and lunar eclipses and the ascension of the signs." These were originally computed by an Indian prince named Phīgar according to Ibn al Adami (whose work was completed by al Qasim in 920). Caliph Mansur ordered Muhammad Ibn Ibrahim Alfazari to translate the Indian treatise, and this was then named "Sindhind," signifying, according to Ibn al Adami, "the revolving ages,"[56] but according to Masudi "the completion of the end," which agrees

[53] Abu Zaid: *Silsilat al-Tawarikh*, ed. Langles, p. 77.

[54] A. Sprenger: *El Masudi's Historical Encyclopaedia . . .*, 1841, p. 152.

[55] *Alberuni's India: op. cit.*, II, p. 15.

[56] *Tarikh ul hukama*, I, pp. 426, 428, 436; Cited by H. T. Colebrooke: *Miscellaneous Essays*, 1837, II, pp. 504, 510.

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well with *Siddhānta*, meaning the perfect end, a term applied to scientific treatises in general in India. One writer rejects the identification of the Sindhind with the Siddhānta of Brahmagupta.[57] In the time of Caliph Mamun (813–33) an abridgement of the treatise was made by the famous Muslim astronomer Muhammad bin Musa al Khwarizmi,[58] who also constructed a table of his own in which he amended the Indian one relating to mean motions on the basis of Ptolemaic and Persian astronomy. More specifically Khwarizmi's astronomical tables have been summarized as including : (*a*) planetary equations from the Sassanian Shah Zij (tables), (*b*) planetary latitudes, non-Ptolemaic, probably Hindu, (*c*) planetary stations from the Almagest, (*d*) two values of the length of the sidereal year, one a common Hindu parameter used in the Brahma siddhānta, the Siddhānta Śiromaṇi and the Arabic Sindhind, the other a Persian value.[59] The Indian system served also as the basis of other contemporary writers, such as Fazl bin Hatim Naziri and Hassan bin Misba. In the 9th century al Kindi wrote a tract on Indian computation (*Hisabul hindi*).[60] On the other hand, it is claimed that Euclid's Elements (Stoicheia) reached India through the Muslims. According to this view, the Rekhāgaṇita of Jagannātha is held to go back to the translated and rewritten version of Euclid by the Persian astronomer, Nasiraddin Tusi (d. 1276).[61]

Apart from the astronomical treatise, some others were translated into Arabic from Hindi, including a tract on poisons by Shanac, rendered under Mamun by his preceptor Abbas bin Said Johari ; a tract on Materia Medica called Shashurd (Suśruta); and others[62] such as Kitab Rai al Hind, Kitab Nufshal al Hind, etc.[63] But

[57] A. Sprenger : *op. cit.*, pp. 154–6.

[58] Zakaria of Qazvin calls him the earliest writer on Algebra in Arabic. His *al jabr* was translated into Latin in 1145 at Segovia thus introducing Algebra into Europe. (G. Sarton : *Introduction to the History of Science*, II, p. 176.)

[59] E. S. Kennedy : *A Survey of Islamic Astronomical Tables* (Transaction of the American Philosophical Society, vol, 46, Pt. 2), 1956, p. 173.

[60] Colebrooke : *op. cit.*, pp. 512–13.

[61] L. R. Rocher : in *Journal of the Oriental Institute, Baroda*, 1954, no. 3, p. 236f.

[62] E. C. Sachau, (*Alberuni's India*, I. P. xxxiv) mentions translations of works on auguring, talismans, veterinary art, a life of Buddha ; books on logic, philosophy, ethics, politics and science of war.

[63] D'Herbelot : *Bibl. Orient.*, cited by Colebrooke : *op. cit.*, p. 512.

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when the author of the *Tarikh'l hukamā* wrote (c. 1198), these treatises had been forgotten, for he says: "Owing to the distance of countries and impediments to intercourse, scarcely any of the writings of the Hindus had reached the Arabians. Of the three celebrated systems of astronomy among them . . . only one has been brought to us namely the Sindhind, which most of the learned Muslims have followed. . . .Of Indian sciences no other communications have been received by us (Arabs) but a treatise on music, of which the title in Hindi is *Biyaphar*,[64] which means "fruit of knowledge," the work entitled Kalila and Dimna upon Ethics, and a book of numerical computation which Abu Jafar Muhammad al Khwarizmi amplified, and which is a most expeditious and concise method, and testifies to the ingenuity and acuteness of the Hindus."

Some further details are available on Indian medical influence in the Muslim world. It was at the Bimaristan (Hospital) of Baghdad, built under Harun (786–808), that the Sanskrit medical work *Suśruta-samhitā* was translated into Persian by the Indian, Manaka, at the request of Yahya b. Khalid al-Baramki.[65] It is not therefore surprising that Rhazes (d. 982), Avicenna and Serapion mention Caraka by name.[66] Apart from Manaka there were two other successful Indian medical practitioners in Baghdad in the reign of Harun, Ibn Dhan and Salih, and the names of 15 Indian medical works rendered into Arabic during the Abbasid Caliphate are known.[67] In 850 A.D. Ali b. Rabban gave a summary of Indian medicine in 36 sections in his Firdaus al Hikmah,[68] and in addition to his 4 main sources he has cited the prescription of an Indian woman physician for female ailments.[69] Rhazes borrows his description of leeches from Suśruta whom he calls Sanasrad.[70] Abu Mansur Mawaffak's work on pharmacology contains references both to "the

[64] The Sanskrit is stated to be Vidyāphala "fruit of science." (Colebrooke, p. 511.n.2.) The reference must at any rate be of interest to musicologists, more so than the import of Roman singing boys into India, and Indian musicians into Sassanid Persia.

[65] Firhist. 303; D. M. Dunlop: in *Encyclopaedia of Islam*, new ed., I, fasc. 20. p. 1223.

[66] See T. F. Royle: *Essay on the Antiquity of Hindu Medicine.*

[67] M. Z. Siddiqi: *op. cit.*, p. 40f.

[68] S. Inayatullah: in *Islamic Culture*, XVIII, no. 1, 1944, p. 3.

[69] Siddiqi: *loc. cit.*

[70] P. C. Ray: *A History of Hindu Chemistry*, I 1902, p. LXVIII.

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medical men of India" generally, and to authorities with such unmistakable Indian names as Sri-Fargavadat (i.e. Śrī-Bhārgava-datta) and Jâtak-Hindi (i.e. the Indian work on nativity). Moreover it has been observed that among the 584 remedies enumerated and described in this work are many characteristic Indian products, such as aloes, tamarinds and sandalwood, and a number of drugs which the author has become acquainted with during his extensive travels in India. He expressly designates them as Indian drugs, and many of these have been identified by one scholar.[71] Indian medicines, treatises and even doctors continued to find favour in Persia, as is evident from the letters of Rashidaddin, who was court physician, historian, and Prime Minister (1295–1318) in the Il-Khanid regime. In letter no. 29 there is a reference to an emissary at Multan, in Sind, who had been sent there expressly to collect certain useful drugs not found in Persia. In letter no. 36 it is mentioned that his Library of 60,000 scientific and literary manuscripts, contained, among others, books brought from India and China. Finally it is stated that 50 skilled physicians had been attracted to his new suburb at Tabriz from India, China, Egypt, Syria and other countries. To each of them were assigned 10 enthusiastic students with specified duties in the hospital.[72]

Even Indian literature has left its mark in the Muslim world. Masudi readily admits that the *Kitab al Sindbād* originated in India. Themes, motifs and tales in them have in fact been shown to have parallels in the Pañcatantra.[73] One writer has sought to identify the place where the first voyage takes Sindbad as Vijaynagar, opposite the ancient city of Anagundi.[74] There is also a distinct possibility that Firdausi borrowed some of his stories for the Shahnama from the Mahābhārata. He admits having obtained his stories "from this famed book of lore," but there is no indication in his work that this refers to the Pahlavi book, the *Khudanameh*, as is usually supposed. At any rate, close parallels have been drawn between the stories of King Kai Khosro and King Yudhiṣṭhira in

[71] J. Jolly : in *Transactions of the 9th International Congress of Orientalists*, 1893, I, pp. 454–5.

[72] E. G. Browne : *Arabian Medicine*, 1921, pp. 105–109.

[73] A. B. Keith : *A History of Sanskrit Literature*, 1928, pp. 360–1. See Cosquin : *Études folkloriques*, p. 265f.

[74] Walckenaer : in *Nouvelle Annales des Voyages*, 6, LIII, p. 6.

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many details and particulars.[75] Firdausi, at Mahmud's court at Ghazni, was in close proximity with India, though there is no direct evidence for his having any personal contacts with Indians. The case is very different with al Beruni, residing at the same court, having been taken as a hostage there in 1017. He is rightly regarded as "the first of scientific Indologists and one of the greatest of all times," and it is averred that he translated two books on Sāṁkhya and Yoga besides making Sanskrit versions of Western scientific treatises.[76] In his book on India, completed before 1030, he not only reveals his familiarity with Indian religious lore, but evinces interest and some considerable knowledge on the whole of Indian civilization. In summing up he says : "We think now that what we have related in this book will be sufficient for anyone who wants to converse with the Hindus, and to discuss with them questions of religion, science, or literature on the basis of their own civilization."[77]

Here, then, we obtain the first glimpse that the Muslims had come to India not solely to exploit it and to impose their own ways upon it, but that some at least of the élite were willing to come to terms with it on an intellectual level. The blending of civilizations later on was, we imagine, not a little due to this attitude of liberality and broad tolerance on the part of the invaders. In times when religion was such a powerful factor in life, the problem of forging an effective unity was insuperable, for in this realm of religion the two peoples were poles apart, and al Beruni is fully aware of this when he says, "we believe in nothing in which they believe and vice versa."[78] And yet in later times there were such Muslims as Amir Khusrau (1318) who transcended this attitude of seeing only the antithesis, and actively sought to explain and even to excuse some of the dissimilarities. Amir Khusrau wrote :[79] "I know that

[75] P. B. Desai : in *Sir Jamsetjee Jejeebhoy Madrassa Jubilee Volume*, 1914, pp. 35–49.

[76] S. K. Chatterji : in *al Biruni Commemorative Volume*, p. 83.

[77] E. C. Sachau : *op. cit.*, 1888, II, p. 246. Other Muslim writers such as Abul Faraj (987) and al Shahrastani (1086–1153) have also described the tenets and sects of Hinduism. (See E. Rehatsek : in *Journal of the Bombay Branch of the Royal Asiatic Society*, 1878, XIV, pp. 29–70).

[78] *Ibid.*, I. p. 19.

[79] Mohammad Wahid Mirza : *The Life and Works of Amir Khusrau*, 1935, pp. 183–4.

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in this land lie concealed wisdom and ideas beyond compute. Greece has been famous for its philosophy, but India is not devoid of it. All branches of philosophy, astrology, *kalam* (metaphysics), in fact every science, except *faqr* (mysticism) is found . . . . Physics, mathematics, astronomy, divination of the past and future are known . . . . In divinity alone the Hindus are confused, but then so are all the other peoples. Though they do not believe in our religion many of their beliefs are like ours. They believe, for instance, in the unity and eternity of God, his power to create from nothingness, etc. . . . They worship, no doubt, stones, beasts, plants and the sun, but they recognize that these things are creations of God and adore them simply because their forefathers did so." It is as if he knew, what must now be obvious, that mutual respect and admiration, and a sympathetic approach to opposite values, could be the only real basis on which the subcontinent might be shared by two such disparate peoples.

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ORIENTAL INFLUENCES IN WESTERN ART

by R. A. JAIRAZBHOY

THIS BOOK traces the passage of specific artistic motifs from the Ancient Near and Middle East to the Hellenic World, Byzantium and Romanesque Europe. In addition to selected motifs it investigates the transmission of techniques and myths, and suggests modes and media through which the migration took place at fixed moments. By resorting to the literary texts of all the relevant cultures — Egypt, Babylonia, Greece, Israel, Islam, etc. — much light is shed on the symbols which, it is claimed, were meaningful even though they became purely decorative in their later forms. In the last analysis the book demonstrates the interdependence and borrowings of cultures in ancient times, a phenomenon which is well worth remembering nowadays when the process is being repeated, albeit overtly and more blatantly, in the opposite direction.

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